

Freewheeling

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Bicycle touring
in Victoria, Tasmania,
across the Nullarbor, and India

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Freewheeling 5

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AUTHORS & CONTRIBUTIONS: Well researched articles (preferably accompanied by photos or graphics) are welcomed by the publisher. The text should be typed double-spaced and black and white photographs should be accompanied by captions. Touring articles should come with a clear map of the route described. These will be returned to authors after publication.

Letters for the reader's column *Write on* are also welcomed — typed if possible.

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Cover photograph by Warren Salomon
Bicycle Touring in SE Queensland. Main range in background.
Photograph this page
Crossing the Teviot Range near Boonah SE Queensland.

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"Heading up north on the east coast bike route, ten days on the road so far . . . tomorrow we'll be in south-east Queensland, Brisbane the day after . . . maybe . . . Mt Lindesay is up ahead of us snagging the cloud . . . the weather is clearing and the sun is getting warmer, though we'll be needing warm clothes tonight still . . . We're carrying a lot of gear but every bit of it gets used . . . those panniers are great!"

karrimor

carrying the load



Iberian Panniers The largest in the range, these panniers have many special features including an extension on the main compartment in 4-oz. nylon (155 g.s.m.) which completely closes with a drawcord for increased capacity and/or improved weather resistance. The flap is elasticated and fastens with straps and Simplic buckles.

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Cycling Bushwalker

Like most suburban kids of the fifties I took the use of a pushbike for granted. It was our age group's transport for commuting to school and recreation. Wheelies on the dirt track in the local treeless park and the occasional day ride to the Royal National Park. Spurred on by the Wiley Park track heroes, we were self-propelled junior bikies, divided in our loyalties between the cycle racers and their big brothers the motorcyclists.

Then school became serious and the bike was a toy to be cast off. As university started there came an introduction to bushwalking. Fantastic! My first wilderness experience made all in the past meaningless, dull and suburban, including my childhood bicycle. I had found the perfect panacea for the pressure of work and urban life, the bushwalk.

Well into my second generation as a bushwalker, my recreation and escape became also a heavy political and organizational commitment. That was cool, we had to help preserve huge bushland tracts for the future.

Somewhere along this track two things happened which at first seemed quite diverse from my normal course. I renewed my interest in downhill skiing and I started riding a bicycle to work. Surprisingly, these two activities gave a thrill of speed and sense of freedom which I felt I had missed for a long time.

It suddenly hit me that the wilderness experience and the thrill of speed could be combined in cycle touring. After my

Above: Group of bicycle tourists outside of Atherton, north Queensland. Below: Bruce Meechan after his encounter with the Hume Horrorway.



first cycle trip I realised it was all there, the excitement of the first downhill shush, the satisfaction of the long uphill push and most of all being in the bush. Twenty years of bushwalking, some downhill skiing and a childhood of bike riding had come together in cycle touring.

A philosophy once suggested to me is that we subconsciously re-create the best times of our childhood in our middle

age. Maybe those treeless parks and day rides to the Royal National Park weren't so dull after all.

Bruce Vote

(Past president and conservation secretary of the Bushwalkers Federation, active environmentalist and wilderness preservationist, now a cycle tourist.)

Sore Loser

While reading *Freewheeling* issue 4, I noticed the map in the *East Coast Bicycle Route Guide* of the Hume Highway.

I am writing this letter in the interests of safety for other bicycle riders who attempt the Hume Highway. It could be called one of the most dangerous highways in Australia.

I started from Wangaratta and headed for Canberra, a 400 km trip. Nearing Gundagai NSW, a huge semi-trailer came from behind, running me off the road. I hit the gravel on the side of the road, at speed, badly bruising my right arm and breaking my left wrist. A passing motorist took me to hospital in Gundagai. As the accident happened on a Sunday, the doctor would not treat me until nine o'clock the following morning. There was nobody to x-ray my wrist on a Sunday.

I had to wait the whole night with an untreated, broken wrist. So bike riders have to be careful of all roads, especially the Hume Highway, as it is a truck line,

sore loser

Bruce Meechan

RAMBLING



Fred and Pauline DeLong, practising what they preach, and enjoying what they practise.

The good book

Fred DeLong is the guru of cycling in the USA and his column in *Bicycling* was one of the magazine's better features. His large-format book, *DeLong's guide to bicycles and bicycling*, published by Chilton and available in paperback for about \$15 and occasionally in hardback for a fair bit more, is probably one of the best books around on the subject. It covers an enormous amount of ground, some of it quite technical, but his approach is quite clear and so it should be comprehensible to most riders. The art is the ability to ride well, safely and smoothly. DeLong details the methods of developing certain abilities and tells how to test them. The chapter is set out as instruction for someone who wishes to coach a group of cyclists. The section on health is by Dr. Eugene A. Gaston, a fellow staffer at *Bicycling*. Gaston treats most of the major problems bicycling can present - pollution, heat disease, saddle

soreness and so on and looks briefly at diet. The only really disappointing chapter is the one on packing for touring which gives very skimpy coverage of this very important subject. Chapters on tandem riding, bicycling with children and on seeing, hearing and being seen are rare in cycling books and are most welcome. He also looks at the techniques for getting the most out of yourself and your machine in a *Spacecraft with a human engine*. Most of the rest of the book is a very good coverage of the mechanics of the bicycle - inspection and repairs, rims and tyres, the parts of the bicycle, wheel building, frame construction and a comparison of tubings. There are the two obligatory chapters, fitting the bicycle/riding position and that one of dubious value which crops up in almost every book on the subject, choosing your bicycle. DeLong's version is much the same as other books' versions - it looks at a range of types as if there are only X types of tourer, Y types of racer etc. This approach compartmentalizes everything

and assumes that people don't want to take a few ideas from this bicycle and a few from that which seems to be the way most people make up touring bicycles at least. DeLong's method also means that there is very little discussion of the advantages of different types of components for this or that use. You have to read half the book to find out. This is fine for people who know their way round a bicycle, but it benefits the beginner little and at whom else is this chapter aimed? His chapter on fitting the bicycle to you is much better than most and dispenses with the old rules of 109 per cent of leg length for seat height and distances from the tip of the saddle to here and there and replaces them with a method which should give most people a better fit than the conventional formulas. The book has only a few faults and is an excellent reference. You could read it straight through, but there's a lot to digest.

It is not as commonly available as some other books, so you may have to hunt for it. Good Hunting.

High standards

The next bicycle you buy will comply with two standards of strength and safety. Most bicycles available today will probably comply, but the standards do not come into effect as legal requirements until the end of December and retailers have until the end of June to obtain stocks and run down their old stocks. The standards are 1927-1978 *Pedal Bicycles* and 2142-1978 *Reflectors for Pedal Bicycles*, laid down by the Standards Association of Australia, copies are obtainable from the association which has branches in each state capital. The standards cover all bicycles except those with a wheelbase of less than 64 cm, competition machines and one-of-a-kind machines. This last category does not refer to bicycles made by assembly of stock components, but to ones built specially for the customer, so virtually all bicycles will come under the consumer product safety standards, as the Trade Practices Commission calls them. All bicycles will need to have the name and address of the Australian manufacturer, assembler or distributor and the serial number of the bicycle marked on them indelibly and permanently.

An instruction manual must come with the bicycle and must cover assembly if the machine is supplied partly assembled. The reflectors must meet certain colour and reflectivity criteria and survive impacts, temperatures and so on. The bicycle must be strong enough to pass specified tests, be free of sharp projections and give sufficient ground and toe clearance during leans and turns respectively. Chainguards are necessary on bicycles without chain tensioners and

on those with derailleurs some form of spoke protector is needed, insertion depths of stems and seat pillars are specified and brakes must meet many criteria. Interestingly, the standards specify that spoke reflectors shall be yellow, despite findings by the Consumer Product Safety Commission in the USA that crystal (clear) reflectors give back more light. (2.5 times as much light as red reflectors according to *Bicycling* magazine.) There are no specifications on lighting in the standards which seems a bit odd considering the number of bicycle accidents at night. Another problem is who will do the testing of bicycles, particularly for small retailers. Will all bicycles need to be tested, or will they be acceptable if they use components which have been tested on other bicycles?

Open wide

Shifting spanners are very handy and most books on maintenance recommend carrying one, usually the 20cm version. But on most bicycles sold in Australia, it won't fit the steering head nuts or the right-hand bottom bracket cup. It's not often that one removes the right bottom bracket cup away from home base, but the steering head needs attention on the road occasionally. Short of carrying a special tool for your steering head and cup, there's no simple solution but if you are prepared to spend a little time combining disposals stores, you may pick up a flat-faced monkey wrench. This only weighs a little more than a similarly-sized shifter and has a much larger opening. They're very hard to find in tool stores these days because they seem to have gone out of fashion, but it's worth its weight in gold at times.



Pannier fixes

Kangaroo Bags (they're from the USA, despite the name) have zippers on all compartments which means you can get things in and out quickly and easily. The load is only supported correctly if the zipper is done up fully and overload-

ing the bags or leaving the zippers less than fully closed on medium to heavy loads results in badly misshapen bags or broken zips. For grocery shopping where the loads are heavy and for tours where the loads are heavy, the distances long and the surfaces rough, relieving the zippers of some of the load is essential. The D-rings on the outsides of the bags are ideal for this and a cord run through them and tied off tightly does the trick. The D-rings seem to be intended more for tying extra things on as the bags come with a lot of short cords. The clips on some Kangaroos are too far apart for the very common Karrimor rack. Rather than just moving the original clips, replacing them with Karrimor ones gives a better grip as they don't bend as readily.

The slit pockets on Karrimor front bags tend to let most objects jump straight out on rough roads, which rather limits their use. A button, zipper, press stud or a couple of strips of Velcro fastener solves the problem and makes the pockets quite useful again.

Eyes right

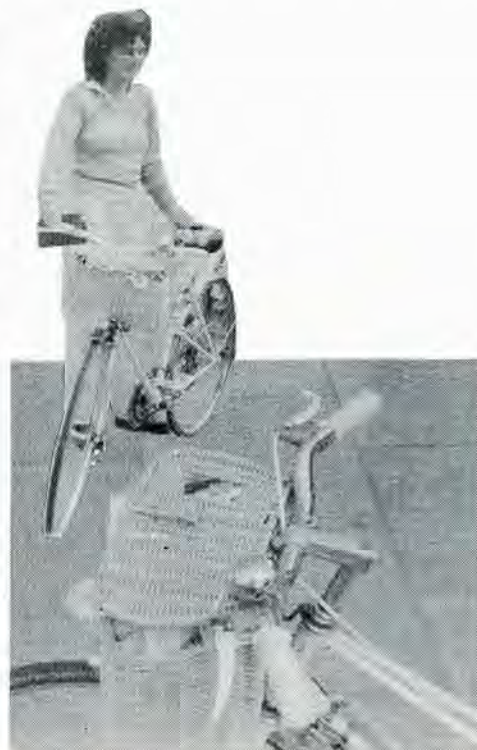
One of the most common injuries to bicyclists is eye damage. A decent-sized stone or twig in your eye at the wrong moment can easily bring you down on a corner or in a some other tricky manoeuvres and as long as you're not just ahead of a car you won't be too badly off. If you are . . .

A pair of sunglasses reduces the risk considerably in daylight, but at dusk or night they are of no use and that's often the worst time with those little bugs which hover at head height in their thousands. Clear plastic lenses are a good idea for those times and for days with little glare. Getting objects out of your eye can be a problem and a mirror (plastic or metal for safety and longevity) or a friend are virtually essential. But poking around in your eye often just aggravates the situation. Rinsing is easier and a level teaspoon of cooking or table salt in a bike bottle (600 ml) of water is the stuff to use. It's very close to the make-up of your tears and soothes as well as sluicing the object out. Don't rub your eye, it just makes it hurt more and makes it more difficult to work out whether there is something in there still. A plastic eyebath available from larger pharmacies for 20 or 30 cents weighs practically nothing and can be very handy in your first aid kit.

The creel thing

Handlebar baskets used to be very popular, but these days they are somewhat rare. They were very practical, but perhaps today's higher theft rate has made them too risky for many people. A

novel form of handlebar basket spotted in the Victorian beach resort of Lorne recently was a fishing creel wired onto flat handlebars. It's permanently attached to the bicycle, so it can't be pinched too easily and with a lid and more solid walls, its contents are less public and less inviting and probably safer. A creel costs about \$8 and a handlebar basket about \$4.50.



No galah

Cycling on Sydney's main highway, Parramatta Road, is not something to take lightly any time other than during protracted petrol strikes. In peak hours it can be horrendous, with trucks and lead-footed car drivers jostling for space. It's not the sort of place you would expect to see someone other than a fairly serious commuter at those times. But there they were, during one of Sydney's recent public transport strikes - an adult male cyclist with a sulphur-crested cockatoo perched on his shoulder. Was the bird giving directions or just a passenger? Another time, a somewhat less intrepid cyclist was spotted on the same stretch of road with his full-sized bicycle inside that tiniest of cars, the Fiat 500 Bambino. The Fiat's front passenger seat was out and in its place were the front wheel and forks and the removed back wheel. The car's seat was on the back seat with the other end of the bicycle. There was plenty of room for the driver and enough space for a small passenger. Perhaps he could carry two bicycles if he opened the sun roof. . . .

Michael Burlace



Billy Snell, who rode from Menzies, WA to Melbourne in 1897.

Some reflections on Australian cycling history

by Jim Fitzpatrick

Advertisement from the Austral Wheel, January 1898.

MASSEY-HARRIS CO. LTD., TORONTO, CANADA
 Australian Branch: 163-169 WILLIAM ST.,
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MASSEY-HARRIS
 THEIR ONLY WANT

In some respects the bicycle has long resembled the woodpile, breathing and the common cold. Always there, occasionally requiring attention, but otherwise neglected and ignored. But unlike the woodpile it has not generally disappeared from Australians' lives. It has instead been the victim of changing social attitudes and perspectives. With advancing technologies, the trend to sanitised and deodorised bodies, air-conditioned offices, and the use of cars, the bicycle's sweat-producing, personal energy-demanding form of locomotion has gradually gone out of favour – partly because riders take their lives in their hands every time they venture onto the streets.

It makes periodic comebacks, and even now Australia is in the middle of its greatest cycle sales period in history. But one is not run down by hordes of commuting cyclists, nor are the bicycle buyers themselves immune from the broader world of status and trends; the "in" machines they buy commonly include expensive multiple gearing systems, narrow high-pressure tyres, and crouched riding positions. Yet, despite extensive use of alloys and other 'advanced' technological items, the machines commonly weigh more than their steel counterparts of the 1880s.

In the 1890s the Australian colonies were swept along in the worldwide craze over the mass-produced, technologically-advanced device. It forced society to reconsider its religious and social attitudes as split-skirted women took to the wheel, Sunday riding became common, and eminent social figures fell prey to the device. Doctors worried about the physical effects of rides of 160 km in one day, and for the colonies' rough roads advised well-sprung saddles to avoid "serious local troubles". Thousands of urban residents became suddenly aware of the atrocious state of many Australian rural roads (and reinforced their feelings about the state of many urban ones as well). Movements were started to improve matters and the nation's first road maps were developed to guide cyclists through the countryside.

The economic impact was notable. Bicycles were not cheap initially, costing the equivalent of several months' income, although the prices dropped radically by the end of the 1890s. Cheap or not, tens of thousands of Australians bought them, often with the help of hire purchase. Many millions of dollars were spent on new and used bicycles, tyres, tubes, accessories and repairs. It meant a large outflow of money to pay for the machines and parts, mostly imported from England, and to a lesser extent from the United States. However, it did result in the development of a significant assembly industry, especially in Victoria. Not surprisingly the focusing of so much

money raised cries that great hardships were being forced upon other segments of the economy. Other recreational, transport, and consumer goods suffered badly when the cyclist allocated his cash.

Cycle racing was big business and gripped the public imagination to a degree almost incomprehensible today. In Melbourne crowds of 40 000 to 65 000 turned out annually to witness the Austral Wheel and Australian Natives' Association Wheel races. In Sydney 65 000 watched the American champion Zimmerman take on Australia's best. Entrants, heats and results were telegraphed throughout the continent. However, corruption meant that eventually the final placings had "not the charm of the unexpected", and the societal flirtation, at least on a large scale, ceased. Until then Australia's crowds were recognised in world circles as being among the largest, most profitable, and most heavily sprinkled with the female element.

In rural Australia the bicycle filled an important niche in the transport spectrum. It could readily carry 20 to 35 kg (up to 70 kg on occasion), required no food or water, did not eat poisonous plants and was two to three times as fast as a horse or camel in most rural conditions. For a large, if itinerant workforce scattered about a vast, arid, flat continent, the machine proved highly suitable. Prior to the establishment of telegraph and postal facilities in the Western Australian goldfields, for example, numerous cycle messenger services operated between the many communities. Subsequently the bicycle was adopted for use along the state's 3 200 km of rabbit fences, and patrols used them along the 550 km Kalgoorlie water pipeline until about 1960. Shearers used the bicycle extensively earlier this century, and sheep mustering and boundary fence riding was carried out by cyclists, particularly when drought conditions left horses unfit for the task. Rural travelling salesmen, prospectors, ministers and dentists used the machine in virtually all settled parts of the country, as well as to cross the more isolated stretches, including the Strzelecki Track, the Nullarbor, and between Adelaide and Darwin.

Australian military authorities appear to have been much more reluctant than their overseas counterparts to outfit cycle troops. When Australians joined the forces along the western front, however, two cycle battalions were quickly formed. Trench warfare, though was not conducive to pedalling and the riders, like their English and French companions, never got to try their luck in advancing against bullets, tanks, and German dogs trained to bring down cyclists. The most significant wartime use of bicycles appears to have been *against* the Australians and their allies. In the Malayan - Singapore advance, the bicycle was used extremely effect-



Above: Photograph sent from the Western Front of Australian troops circa 1916. Below: North East of Alice Springs, 1974.



ively by the Japanese. In reading Churchill's writings one can almost see him seething with indignation that pre-war 'hidden reserves' of such mundane, even lowly, devices could have played a role in the demise of the Far Eastern bastion.

The postal authorities in Melbourne adopted bicycles for pillar clearing in mid-1898. One cyclist could do the work formerly requiring a team of horses, a wagon, a driver and the pillar clearer. In 1905 the post office estimated the total savings to have been \$7 000 per year. By 1965 more than 9 000 bicycles were in use. Despite the incursions of motor vehicles the bicyclist is still a workhorse in the mail delivery network, providing, on many routes, the most efficient delivery in terms of time and money. However, whereas a cycle route, with its access to a machine, was once a goal of young postmen, the changing social climate means that bicycles today post occasional 'recruitment problems'. The young now seek their petrol-powered visions.

Because of the very nature of the man-machine interaction, the use (or non-use) of the bicycle can provide a fascinating insight into a society. In Australia the society's perception of itself has often

been sharply focused in aspects of bicycling: as a craze, a humble tool, a symbol of protest. In studying Australian cycling history it appears that the basic bicycle itself has evolved, dinosaur-like, into a series of specialized bikes.

Sadly, it appears that today's cycle designs are often neither necessary nor even appropriate for the bulk of Australian cycling's needs. And the activists for sealed bike paths are themselves demanding an expensive, high-technology transport network for their increasingly specialized machines — the very antithesis of the bicycle's forte throughout most of its history in Australia. This divergent evolution has resulted from, and demands, a technological society's mores; for despite claims to the contrary, the bicycle is not, and never has been, a low technology device. And pedalling, like chopping in the woodpile, requires time and human effort. Those requirements, in an increasingly fast-paced society, explain much of the changing role of the Australian cyclist.

Previously published in a slightly different form in the CANBERRA TIMES, February, 1978.

the good gear for the touring cyclist from your bike shop



Bell Helmet

America's premier bicycle helmet: over one million in use. Tough Lexan shell with ventilation scoops. Additional sizing pads also available. Complete range of sizes.



C & D Touring Helmet

Australia's answer to the Bell. Light hand-laid fibreglass shell. Available in a good range of head sizes. Smallest size (3) suitable for children. Colour: safety yellow with black speed stripes.



Anatomic Saddle

A new design with padded *bumps* to provide support. Designed to fit the human anatomy. Two models to suit the individual pelvic structure of men and women bicyclists. Choice of suede or vinyl coverings.



Phil Wood Bottom Bracket

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Visi Vest

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Berek Tail-light

Sensible quality. Cheaper to operate than most battery lights. Uses two D cells. Light body screw fixes to bicycle and reduces risk of theft.



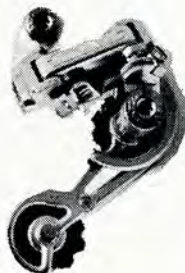
Berek Headlight

The brightest battery operated head light. Cheap to operate: uses D cells. Handy mounting, can be used as a torch.



Handy Tour Tyre

Flexible nylon beading allows folding of tyre into small bundle (the size of a tube). The only way to carry a spare tyre.



Sun Tour Rear Derailleur GT

Long arm to accommodate alpine gearing. Top quality light-weight alloy construction.



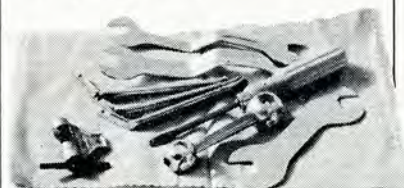
Sun Tour Ultra 6 Clutch

These six and seven-speed clutches provide *ten-speed* simplicity with *fifteen-speed* gear range. When used with the Ultra 6 chain these clutches make for reliable high performance touring.



Hantrade Rear Panniers

420 denier nylon. Capacity 40 litre/pair. Colour: Gold. Clip fastening to rack for easy removal.



VAR Tool Kit

Top quality French tools. Kit covers basic on-the-road repairs.



Cyclists Touring Shorts

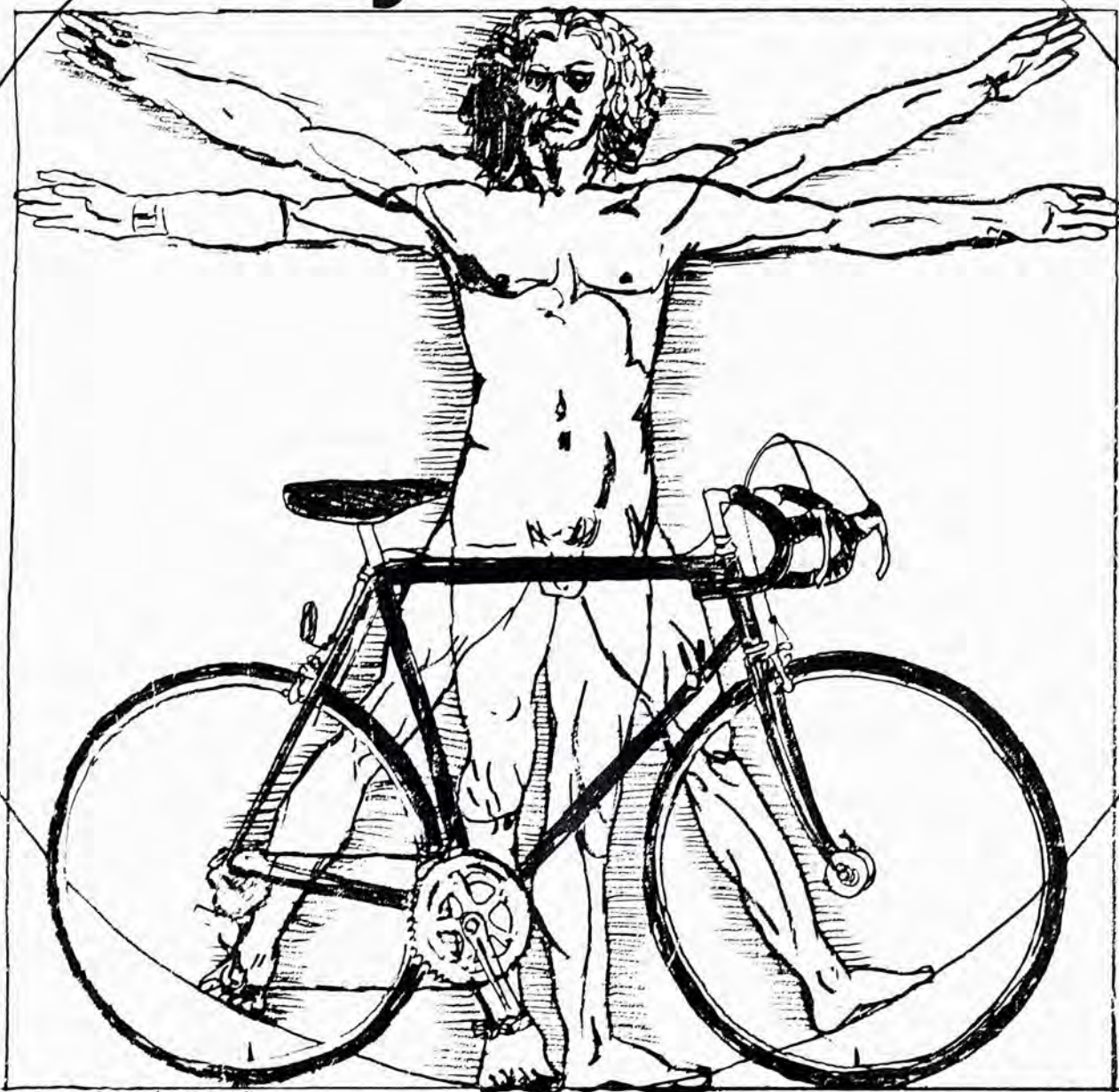
For riding comfort with chamois seat patch insert. Long fleecy lined touring tights for winter riding also available.



Randonneur Handle Bars

Popular touring design. Up swept shape gives comfort particularly when used with a padded handle bar tape such as the Andrew Hague type.

Getting the most out of the body/bike union



WOLF apologues to MR Da Vinci

WOLF

by Chas Coin

Are you buying a new bike? Having a new frame made by a custom builder? Are you dissatisfied with the position you have on your present bike? Do you want to get set up for greatest efficiency and comfort?

If any of these apply, you will want to design your bike around the body you are blessed with. The variables you have to make your bike a better fit are: frame size; correct saddle position; disposition of the upper body; and proper fitting of cycling shoes, clips, straps and cleats.

However, first find out something about your physique and skeletal structure. The measurements you will need to take are: height to the top of the femur (F); height to the shoulder joint (S); trunk length ($T = S - F$); inside leg length (I); arm length (A); and shoe size. See Figure 1.

These measurements are best done barefoot and with someone else holding the tape measure.

The height to the top of the femur: this bone is quite easily found on most men but can be difficult to locate on many women. The point of measure-

ment is the hip rotational point and is marked by a fairly definite protuberance.

The inside leg length: this should be found to be about 6cm less than the femur measurement in most men and about 8cm less for women.

Shoulder height: this is measured to the top of the shoulder joint.

Arm length: measured from the top of the shoulder joint to the V between the thumb and forefinger.

Frame Size

Table 1 contains the optimum frame size (D) as measured by the length

Table 1 Frame Size for Varying Leg Length

Femur Height		Inside Leg	1/leg – 28	Frame Length	
Male	Female			D(cm)	D(inches)
80	82	74	46	48.3	19.0
81	83	75	47	49.4	19.5
82	84	76	48	50.4	19.8
83	85	77	49	51.5	20.3
84	86	78	50	52.5	20.7
85	87	79	51	53.6	21.1
86	88	80	52	54.6	21.5
87	89	81	53	55.7	21.9
88	90	82	54	56.7	22.3
89	91	83	55	57.8	22.8
90	92	84	56	58.8	23.1
91	93	85	57	59.9	23.6
92	94	86	58	60.9	24.0
93	95	87	59	62.0	24.4
94	96	88	60	63.0	24.8
95	97	89	61	64.1	25.2
96	98	90	62	65.1	25.6
97	99	91	63	66.2	26.1
98	100	92	64	67.2	26.5
99	101	93	65	68.3	26.9
100	102	94	66	69.3	27.3
101	103	95	67	70.4	27.7
102	104	96	68	71.4	28.1

$D = (\text{Inside leg} - \text{Bottom Bracket height} - 1\text{cm clearance})/\sin 73^\circ$

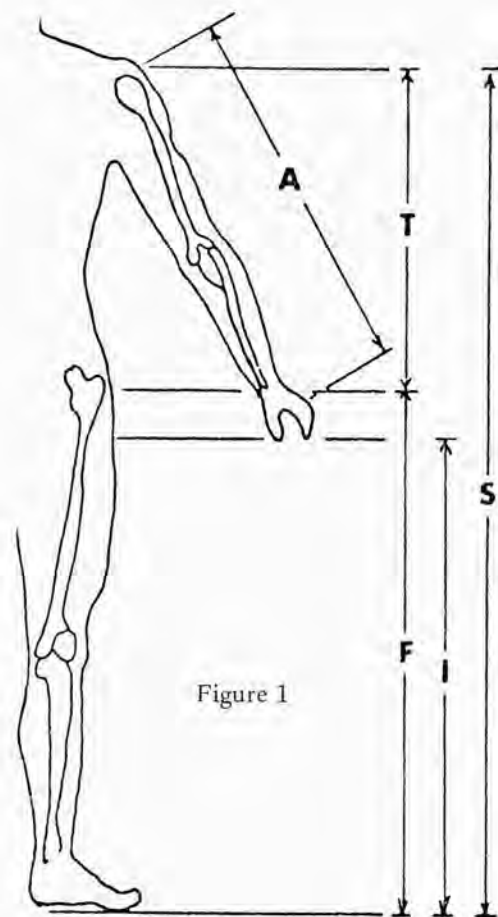


Figure 1

of the seat tube from the centre of the bottom bracket to the top of the top bar (see Figure 2). The table has been calculated assuming a bottom bracket height of 27cm, a seat tube frame angle of 73° (from the top bar), and a 1cm clearance of the crutch from the top bar when astride the bike with both

feet flat on the ground. If your frame has a bottom bracket height or frame angle significantly different from these, use the formula for calculation.

Saddle Height

The optimum saddle height for maximum power can best be gained from experi-

mentation, but if the saddle height (from the centre of the fully extended pedal to the top of the saddle, H + crank length) is set equal to the femur height, then most people will find that they are close to their correct height. Setting this distance at 1.09 x inside leg length will give approximately the same result.

$$R = (A^2 + T^2 - 0.4584 \times AT)^{1/2}$$

Table 2

Trunk Length											
Arm Length											
	45	46	47	48	49	50	51	52	53	54	55
50	59.1	59.7	60.3	60.9	61.5	62.1	62.7	63.3	64.0	64.6	65.3
51	59.8	60.3	60.9	61.5	62.1	62.7	63.3	63.9	64.6	65.2	65.9
52	60.5	61.0	61.6	62.2	62.7	63.3	63.9	64.6	65.2	65.8	66.5
53	61.2	61.7	62.3	62.8	63.4	64.0	64.6	65.2	65.8	66.4	67.1
54	61.9	62.4	62.9	63.5	64.1	64.6	65.2	65.8	66.4	67.0	67.7
55	62.6	63.1	63.6	64.2	64.7	65.3	65.9	66.5	67.1	67.7	68.3
56	63.3	63.8	64.3	64.9	65.4	66.0	66.5	67.1	67.7	68.3	68.9
57	64.0	64.5	65.0	65.6	66.1	66.7	67.2	67.8	68.4	68.9	69.5
58	64.8	65.2	65.8	66.3	66.8	67.3	67.9	68.5	69.0	69.6	70.2
59	65.5	66.0	66.5	67.0	67.5	68.0	68.6	69.1	69.7	70.3	70.8
60	66.2	66.7	67.2	67.7	68.2	68.7	69.3	69.8	70.4	70.9	71.5
61	67.0	67.5	67.9	68.4	68.9	69.4	70.0	70.5	71.0	71.6	72.2
62	67.8	68.2	68.7	69.2	69.7	70.2	70.7	71.2	71.7	72.3	72.8
63	68.5	69.0	69.4	69.9	70.4	70.9	71.4	71.9	72.4	73.0	73.5
64	69.3	69.7	70.2	70.7	71.1	71.6	72.1	72.6	73.1	73.7	74.2
65	70.1	70.5	70.9	71.4	71.9	72.4	72.8	73.3	73.9	74.4	74.9
66	70.8	71.3	71.7	72.2	72.6	73.1	73.6	74.1	74.6	75.1	75.6
67	71.6	72.1	72.5	72.9	73.4	73.8	74.3	74.8	75.3	75.8	76.3
68	72.4	72.8	73.3	73.7	74.1	74.6	75.1	75.5	76.0	76.5	77.0
69	73.2	73.6	74.1	74.5	74.9	75.4	75.8	76.3	76.8	77.3	77.8
70	74.0	74.4	74.8	75.3	75.7	76.1	76.6	77.0	77.5	78.0	78.5
71	74.8	75.2	75.6	76.0	76.5	76.9	77.3	77.8	78.3	78.7	79.2

On successive rides of several kilometres, the saddle should be raised 2-3mm at a time until strain is felt behind the knees, especially when riding low on the bars. The saddle should then be lowered from this position by about 1-2cm until it feels comfortable.

Reach

The reach is governed by the fore-aft adjustment of the saddle, the length of the headstem, the reach of the handlebars and the length of the top tube of the frame.

Table 2 gives the optimum reach (from centre of saddle to handlebar grip points (the junction of the brake levers with the handlebars and the forward drop position) for varying trunk length and arm length. This table was derived after studying a number of A-grade road racing cyclists who had achieved their positions after years of experimentation.

When the triangle of trunk length (T), arm length (A) and reach (R) were plotted (see Figure 3), the angle between trunk and arm was $75^{\circ} 45' \pm 30'$. The formula derived is a version of the cosine rule, $R^2 = A^2 + T^2 - 2AT \cos 75^{\circ} 45'$.

The position derived from this formula should be the optimum for general or touring use as road racing cyclists on the whole do not have extreme positions as a large degree of comfort is required for maximum efficiency over a long distance.

To determine your best headstem length, subtract from the calculated reach, the reach of the handlebars (usually about 9-10 cm) and the distance from the centre of the saddle to the expander bolt head on the headstem.

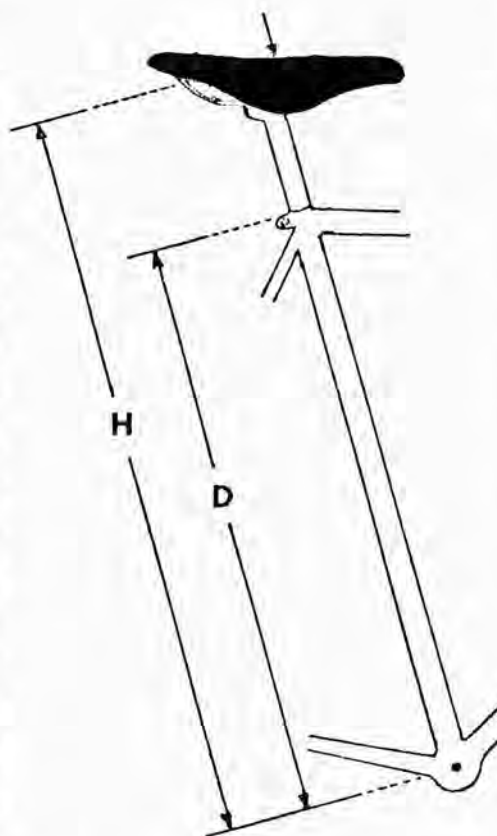


Figure 2

Toe Clips

To get maximum efficiency out of each thrust of your leg, you will need to have your foot in the right position. That position will be with the ball of your foot centred over the axle of the pedal. To maintain your foot in this position without toeclips is fairly difficult, the full extent of this difficulty becomes apparent only after you begin using clips.

Toe clips are designed to help keep your foot in approximately the optimum position. The length of the clip will need to vary with your shoe size. Table 3 gives an indication of the size of clip required.

Cleats

Cleats were once thought to be the domain of the racing cyclist but with the resurgence of cycling in general, many non-racing cyclists have discovered their benefits. With cleats holding your foot in the correct position you can pedal in a far more relaxed fashion. There is no longer a need for some of the muscles in the legs to be used just to keep your foot in the right position. More power is available, especially under heavy load situations such as climbing hills, by bringing into play the retractor muscles to pull up on one leg while the other leg is pushing down. One of the things most cyclists find when they begin to use cleats is that their natural cadence increases.

The fitting of cleats is probably one of the hardest jobs on the technical side of cycling and should be done with extreme patience and care. I must admit that with most of the competitive cyclists

$$R = (A^2 + T^2 - 0.4584 \times AT)^{1/2}$$

Arm Length	56	57	58	59	60	61	62	63	64	65	66
50	66.0	66.7	67.3	68.0	68.7	69.4	70.2	70.9	71.6	72.4	73.1
51	66.5	67.2	67.9	68.6	69.3	70.0	70.7	71.4	72.1	72.8	73.6
52	67.1	67.8	68.5	69.1	69.8	70.5	71.2	71.9	72.6	73.3	74.1
53	67.7	68.4	69.0	69.7	70.4	71.0	71.7	72.4	73.1	73.9	74.6
54	68.3	68.9	69.6	70.3	70.9	71.6	72.3	73.0	73.7	74.4	75.1
55	68.9	69.5	70.2	70.8	71.5	72.2	72.8	73.5	74.2	74.9	75.6
56	69.5	70.2	70.8	71.4	72.1	72.7	73.4	74.1	74.8	75.4	76.1
57	70.2	70.8	71.4	72.0	72.7	73.3	74.0	74.6	75.3	76.0	76.7
58	70.8	71.4	72.0	72.6	73.3	73.9	74.6	75.2	75.9	76.6	77.2
59	71.4	72.0	72.6	73.3	73.9	74.5	75.2	75.8	76.5	77.1	77.8
60	72.1	72.7	73.3	73.9	74.5	75.1	75.8	76.4	77.0	77.7	78.4
61	72.7	73.3	73.9	74.5	75.1	75.7	76.4	77.0	77.6	78.3	78.9
62	73.4	74.0	74.6	75.2	75.8	76.4	77.0	77.6	78.2	78.9	79.5
63	74.1	74.6	75.2	75.8	76.4	77.0	77.6	78.2	78.8	79.5	80.1
64	74.8	75.3	75.9	76.5	77.0	77.6	78.2	78.8	79.5	80.1	80.7
65	75.4	76.0	76.6	77.1	77.7	78.3	78.9	79.5	80.1	80.7	81.3
66	76.1	76.7	77.2	77.8	78.4	78.9	79.5	80.1	80.7	81.3	81.9
67	76.8	77.4	77.9	78.5	79.0	79.6	80.2	80.8	81.4	82.0	82.6
68	77.6	78.1	78.6	79.2	79.7	80.3	80.8	81.4	82.0	82.6	83.2
69	78.3	78.8	79.3	79.8	80.4	80.9	81.5	82.1	82.7	83.2	83.8
70	79.0	79.5	80.0	80.5	81.1	81.6	82.2	82.7	83.3	83.9	84.5
71	79.7	80.2	80.7	81.3	81.8	82.3	82.9	83.4	84.0	84.6	85.1

Table 3

Details of Measurements for Blocks and Toeclips

Toeclip Length	British Shoe Size	Italian Shoe Size	Approximate Distance from toe to slot (P)
Short	3	37	9.5 – 10.0
	4	38	10.0 – 10.5
	5	39	10.5 – 11.0
	6	40	11.0 – 11.5
Medium	7	41	11.5 – 12.0
	8	42	12.0 – 12.5
Long	9	43	12.5 – 13.0
	10	44	13.0 – 13.5
Extra Long or with spacers	11	45	13.5 – 14.0
	12	46	14.0 – 14.5
	13	47	14.5 – 15.0
	14	48	15.0 – 15.5

I have known it has been a hit-and-miss affair.

In selecting cleats you should get a pair with a deep slot (greater than 5mm) and preferably of all-metal construction as these last longer than plastic, nylon or fibreglass. Some brands of cycling shoes come with adjustable cleats already mounted, but most shoes need separate cleats for attachment to the shoe sole.

The most common method of attachment is with nails but a better means of attachment is with self-tapping screws (No. 6 x 3/8") in which case you will need to redrill the nail holes in the cleat. Nails are hard to put in if you do not

have a shoe last, and they come out again with remarkable ease.

To find the best position with shoes with pre-mounted adjustable cleats, consult Table 3 to get the approximate distance from the front of the shoe to the slot. Set it, tighten the adjustment bolts gently and go for a ride. The cleat should gradually move into the correct position. When this position has been achieved, secure the bolts.

For shoes without adjustable cleats the method is somewhat different. Firstly you should go for an easy ride in your cycling shoes, with the toe straps loose and using a moderate gear which

enables you to pedal with ease. (It is assumed that you are using toe clips the right length or longer). On arriving back from your ride you should find an impression on the soles of each of your shoes corresponding to the rear plate of each of the pedals. Mark these carefully with a felt-tip pen right across the sole. Check with Table 3 that the position of this mark from the front of the shoe is in approximate agreement. Also check that the distance is the same on each shoe. The angle of the block is far more critical than the fore-aft adjustment. Misalignment of the cleat will eventually feed back to your knees etc.

The next step is to place the cleat on the sole of the shoe and align the slot and the marked line. To get proper fitting on most pedals you will need to mount the cleat close to the inside of the sole (as indicated in Figure 4). When aligned, make a small pilot hole with a pointed tool in one of the holes in the top row of the cleat. Insert one screw and drive it home, making sure the cleat does not shift. Making sure that the cleat is still aligned, put a pilot hole then a screw through one of the rear holes. Go for a ride and see if the position feels right. Repeat for the other shoe. If they feel OK, add one more screw in the front and use the shoes for at least a week. When you feel the cleats are correctly placed, add a few more screws.

With your bike adjusted to fit your body you should find cycling an even more enjoyable experience.

Figure 3

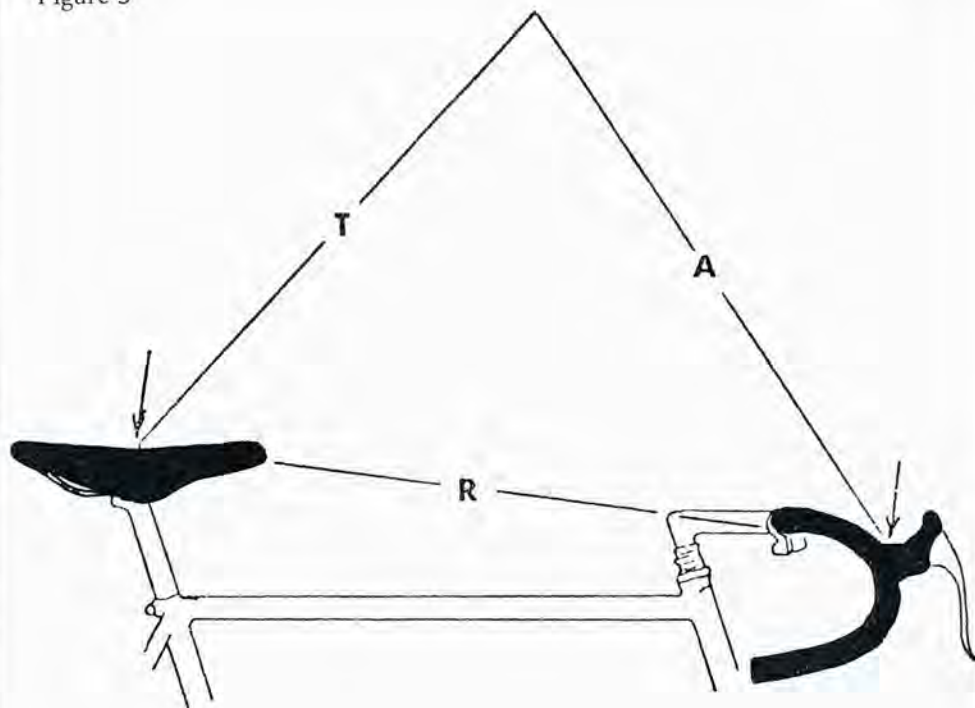
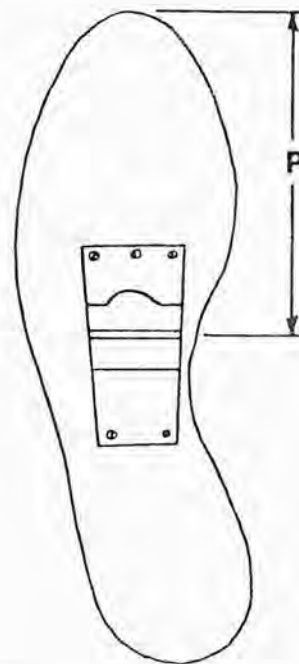
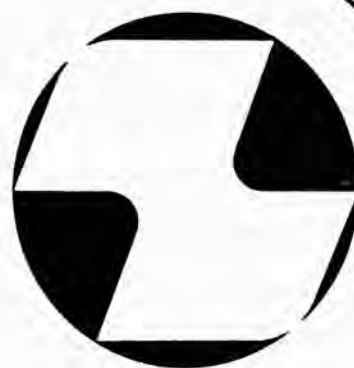


Figure 4



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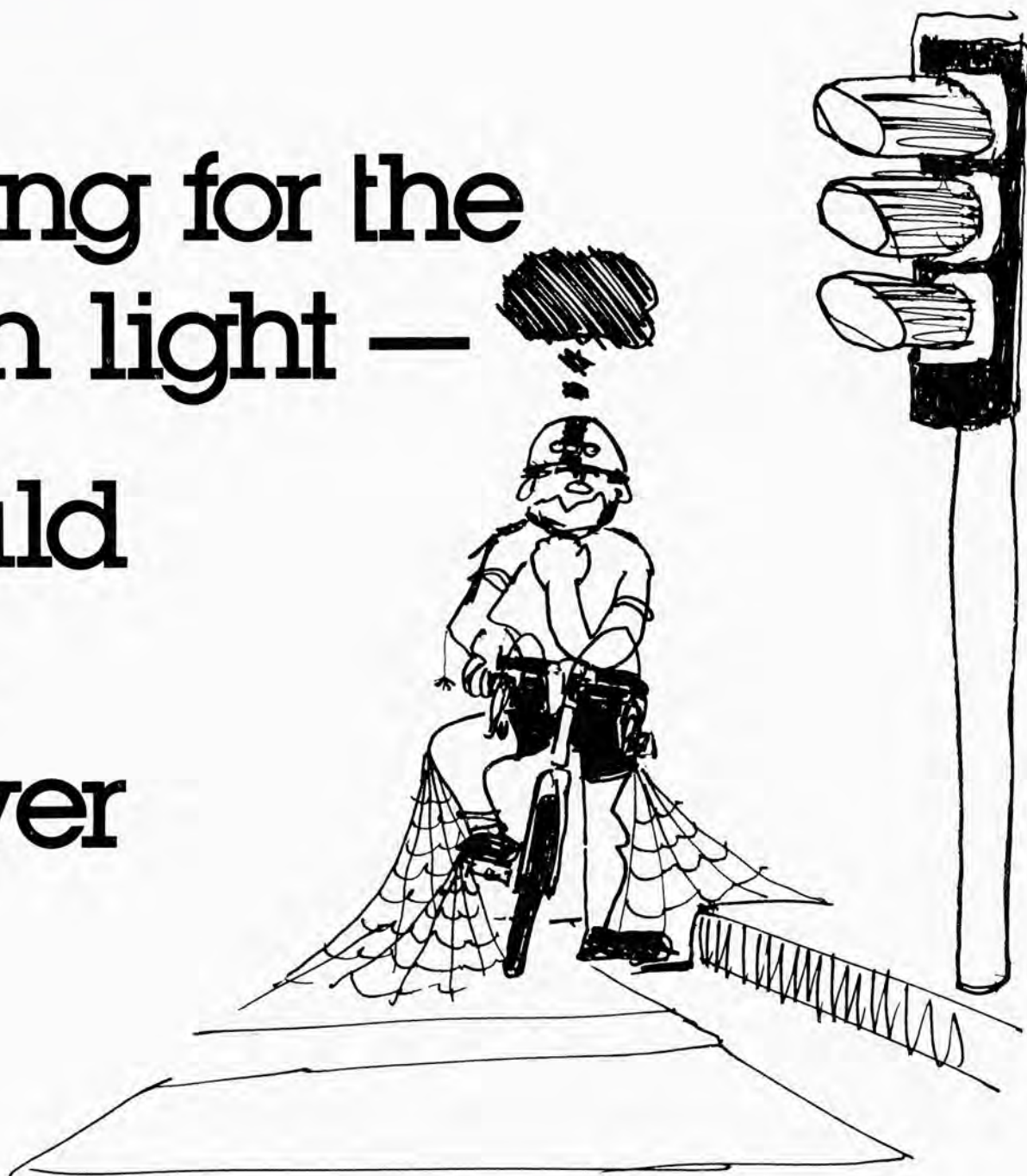
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Waiting for the green light — it could take for ever

by Warren Salomon.



It's late at night somewhere in the city or suburbs. There you are at a side street intersection on your bicycle trying to get a green light to join the home-flowing traffic on the main road — someone once drew your attention to those rectangular tar marks on the road just before the stop line. Apparently they mark cables put in the road to detect vehicles approaching the lights — they obviously missed you. Perhaps a second try will activate them. Maybe a jump down on the pedals just as the rear wheel goes over the detector,

... For anyone who has done any amount of city bicycling this scene will be familiar. The cause of the problem is that those sensor loops which are supposed to detect approaching vehicles (and change the automatic lights) don't

register for bicycles. Most regular city riders are nowadays adopting more dangerous habits of ignoring these lights if there are no cars to activate the detectors. It's no use jumping up and down, it won't work. The loop detectors work on an electromagnetic principle similar to metal detectors used by the military for detecting mines etc. The loop is actually wire laid in grooves cut into the road surface and covered with tar to keep it in place. The wire loop generates an oscillating magnetic field. Intercepting this field with a conductive solid — such as any common metal — causes the oscillating magnetic field to generate electric currents in the conductive metal. This draws energy from the loop, and the resulting power load is detected by an electronic amplifier which forms part of

the detection equipment. The detector is adjusted so that intercepting some part of the field, say 10% for example, causes the detector to respond. It doesn't matter which portion of the field is intercepted, as long as at least 10% is intercepted.

The problem for bicycle riders is not in the electronic equipment but in the loop design. The poorly installed loop scatters its field so widely that any large object nearby intercepts that 10%. The properly installed loop concentrates its field so that it is very susceptible to objects where it is supposed to detect them but very unresponsive to objects in other places.

Arranging the loop so that it forms a *small volume magnetic field* both makes it easier to detect any object just over the loop and eliminates detection of

adjacent objects. A loop wound in a figure 8 does this. Winding the loop in a figure 8 pattern forces the field that goes up inside one circle to come down inside the other with very little stray field.

It is not necessary to figure 8 all detector loops although such loops will provide cleaner detection for all vehicles. However every stop line loop in right turn only lanes and in outside through lanes should be figure 8 wound. Furthermore, stop line loops should be placed in the outside through lane so that it extends to within one foot of the curb or the edge of the roadway in order to detect cyclists in the normal riding position on the roadway.

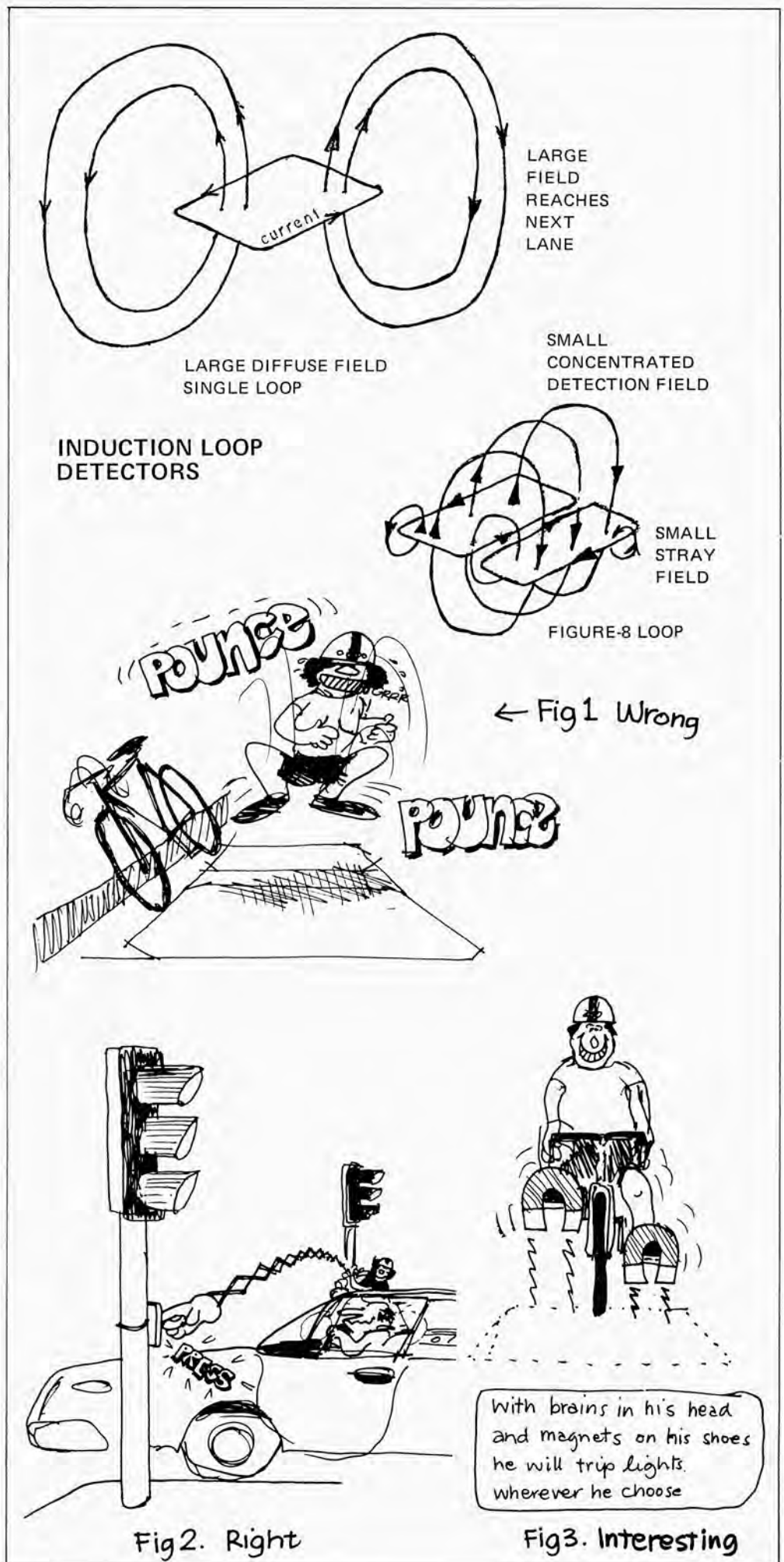
The preceding technical information gives a way out for overcoming the problems of detecting bicycles as well as motor vehicles. However some solutions may not be just technical. Both ACT and Victorian bicycle lobby groups — Pedal Power ACT and BIV have done some research on the problems. It appears from these studies that some loops presently detect bicycles while others don't. In a survey of seven traffic light systems in Melbourne, the BIV found that only two sensed a 16kg steel bicycle. While one of the others would respond to four bicycles all would detect a motor car. In correspondence with the Road Safety and Traffic Authority of Victoria (ROSTA) the BIV was told that *Detector equipment currently available for traffic signals based on magnetic induction loops is generally not capable of reliably detecting bicycles because of the relatively small mass of metal involved . . .* ROSTA offered no solution to this problem and the BIV still awaits comment and action from them on Forrester's information (see references below).

Meanwhile it is illegal in most Australian states for a bicycle rider to proceed through a red light even if the light refuses to change because of faulty detection equipment design. The law strictly interpreted would make it also illegal for a cyclist to overcome this defect in the traffic signal by the orthodox and potentially unsafe manoeuvre of moving sideways and pressing the pedestrian call button. In a situation where a right hand turn is being made this move is out of the question.

In future issues *Freewheeling Australia* will present more information on this problem as events proceed. In the meantime individuals can put their efforts to good use by supporting the work of the groups mentioned.

References:

Cycling Transportation Engineering
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Oakland Bay Bridge, California. Commuter bicycle shuttle in transit.

by Alan Parker

Compared to cars, buses make better use of roads, and express buses make better use of freeways, so any publicly acceptable change in behaviour which will lead to people being able to utilise buses better needs to be encouraged.

The steady increase in bicycle usage which has been documented in several planning studies throughout Australia shows that people will use bicycles, given the right opportunities.

Express buses and suburban rail systems in low-density suburbs have one thing in common, which is the long distance people have to travel to the stop or station. The key element in making express bus systems work is in making it easier to get to and from the bus stop. Using local buses as feeders is not practical for the reasons stated previously but using bicycles, mopeds or power-assisted bicycles solves the problem.

Several years ago, Dr David Eggleston, Professor of Engineering at San Diego University started to investigate and study bicycle/express bus systems and in 1973 published a major study on the subject. The system shown illustrates Eggleston's ideas for express buses using trailers to carry bicycles.

Eggleston's approach is opposed to that of a hard core of planners who seek capital-intensive solutions to the air pollution and transportation problems. Several billion dollars have been wasted throughout the Western world on research and development on projects such as elevated guideway systems, magnetic levitation systems and remarkably little has been gained by this vast expenditure. Dr Eggleston notes, "When I began work on this project about four years ago, I thought that the engineering and construction of the trailer would be the most difficult problems in getting the system going. It turned out that the political and financial problems were much harder and took much longer to solve."

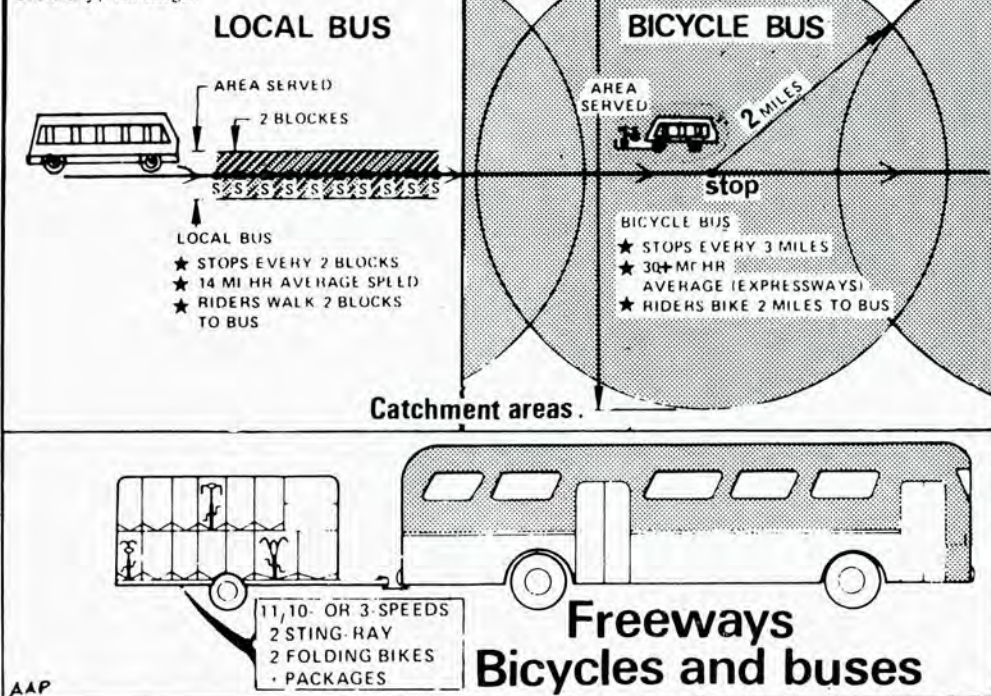
The curious thing about freeways is that the maximum carrying capacity is at speeds of 60-70 km/h because when people drive faster they leave a lot more room between them and the next car, thus reducing the number of cars on the lane at any one time. Today, in the USA, buses are beginning to realise their full potential as a versatile and economical link in a balanced transportation system. Bus transportation has been the plodding work-horse of many metropolitan public transport systems for a long time — now it is being transformed into an effective rapid transit system.

Once the buses get their own right-of-way and can operate without the interference of other traffic or pedestrians at a good average speed, then they compare favourably with the high carrying capacity of other mass transit systems, such as

DUAL MODE TRANSPORTATION

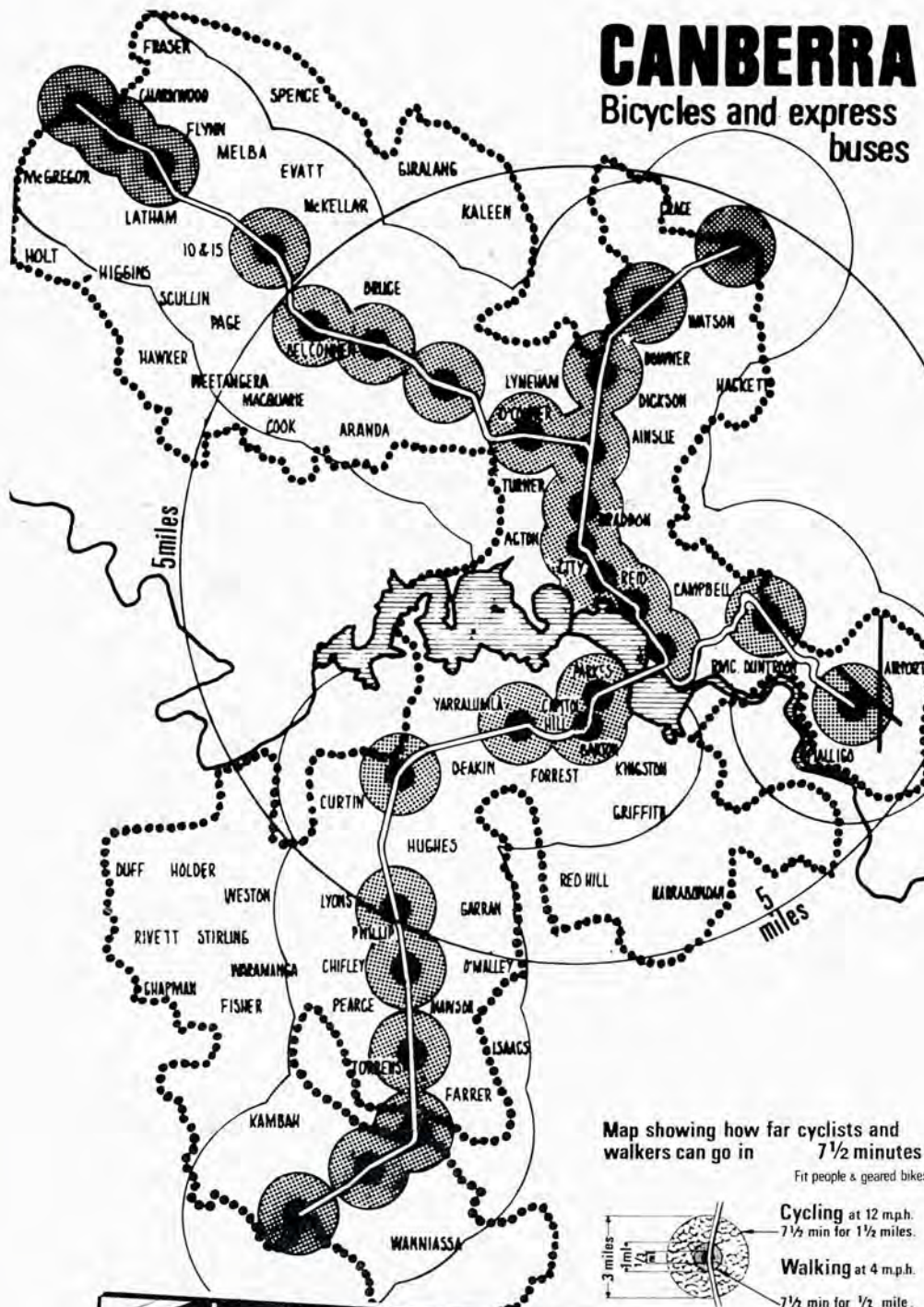
MAKING PUBLIC TRANSPORT WORK part 2 Bicycle/Motor transport

Eggleston, David M. "Toward A Dual-Mode Bicycle Transportation System," California State University, San Diego.



CANBERRA

Bicycles and express buses



underground railways and express suburban railways. The American federal government is enthusiastic in its support of bus systems, both in words and hard cash. It sees the bus as being an off-the-shelf device that can solve today's problems today, and is aware that way-out technical solutions will come along sometime, but for the present, it wants action with what is available.

Apart from its very high carrying capacity, a bus rapid transit system is seen as having other great advantages over other rapid transit systems:

1. It makes better use of existing roads and freeways;
2. Low capital investment;
3. Flexible routing, which could be very responsive to commuter needs, especially if operated in co-operation with commuter bus clubs and computerized monitoring systems;
4. Single vehicle pick-up and line-haul;
5. Energy and fuel savings;
6. Off-peak use for charter operations;

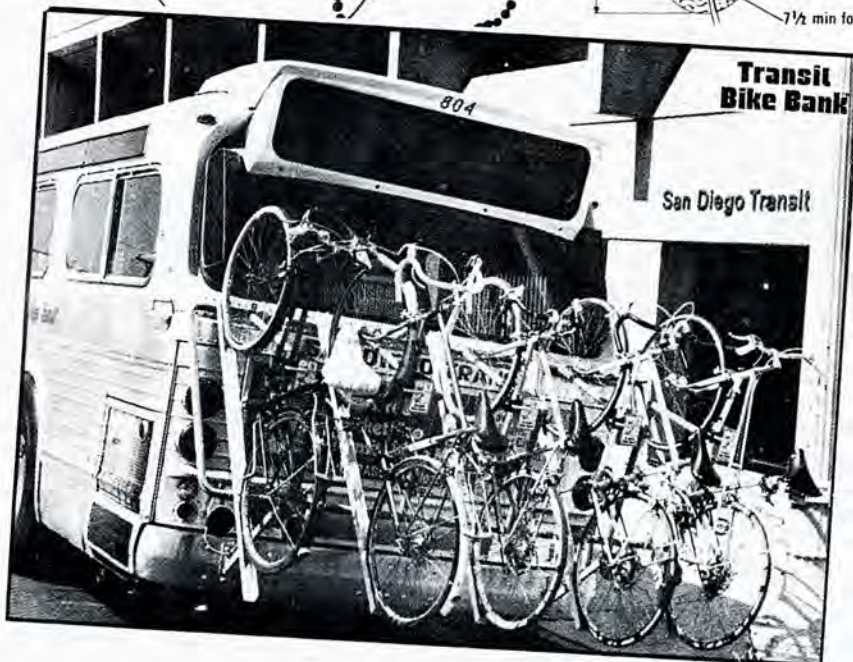
Bicycle/Bus Systems for Canberra

As with bicycle/train dual-mode there is considerable scope for using the "park and ride" system as well and the map shows a proposal for using an extensive park and ride system in Canberra. Even with the limited route shown on high speed arterial roads it can be clearly seen that most of Canberra's population is within easy cycling distance of the proposed express bus stops. For several years the cycling community in Canberra has been asking for secure bicycle storage facilities at places such as Woden town centre and there is some possibility that these will be provided soon.

A combination of "park and ride" and the transport of bicycles on the bus itself would be the best solution in a new area such as Canberra, in which bicycle trailers are practical because of adequate road widths and curvature.

In all Australian capital cities express bus services are essential and bicycle/bus facilities will be crucial for their success. A "core" of buses with trailers which operate at all hours would provide a similar flexibility to bicycle express bus users, although as with the rail system, "park and ride" would be the basis of a bicycle/express bus system in the peak hours. Bicycle trailers have limited application in narrow city streets such as in central Sydney and would be difficult to operate during peak hour.

Bicycles mounted on the front of the bus are more suitable. These and bicycle trailers can be crucial in providing that extra flexibility for users. For example bicycle/rail commuters in Melbourne can easily put their bicycles on the train during the evenings and on the weekends and this gives them a lot of flexibility in using their bicycles for long social and recreational trips they would otherwise





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have to make by car. This also applies particularly to long trips in and out of the central business district in off-peak hours and allows cyclists to use their bicycles a lot more.

Bicycles and Minibuses

The shared minibus with bicycle racks on the back is theoretically one of the most flexible transport vehicles ever designed. Standard trailers as shown could also be used. The integration with bicycles would greatly increase both the catchment area at the starting point of trips to work, and the area served along and at the end of the route.

It reduces the length of the trip for the driver, who does not have to take everybody home except during periods of bad weather. This system offers the advantage of allowing people to be dropped directly at their destinations on days when the weather makes cycling unpleasant. The flexibility of the fully-equipped minibus is an unexplored area of transportation planning.

Bicycles and Shared Private Vehicles

The most common form of bicycle/car dual-mode is the carrying of bicycles in the boots or on the luggage racks of cars, taking them to recreational areas in or near the big cities or to country areas where a good back road system exists carrying very little car traffic. Such dual-mode uses are becoming increasingly popular with long-distance touring cyclists and family groups going for short recreational rides. The boot of the car can take children's bicycles, adult bicycles with their front wheels removed or fold-up bicycles, but there are very few properly designed racks which fit on the rear or top of a car in use in Australia.

Bicycle racks for cars are just coming onto the Australian market and within a few years, will become very common as they are in California and many other American states. As with other forms of dual-mode bicycle travel, bicycle/car systems in general and bicycle/shared car systems need to be studied in depth.

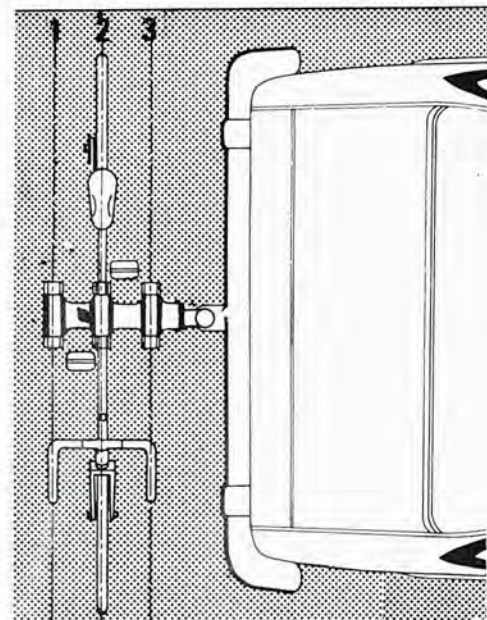
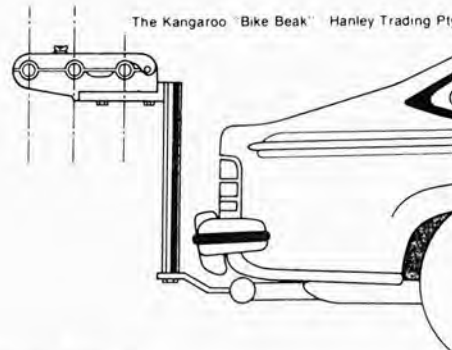
As the recreational use of bicycles and cars together gathers momentum and people become familiar with using them, a major marketing effort should be made to encourage people to share their cars with people willing to cycle to their homes for a pickup. Many people now travel to and from work with friends, and at least 10 times as many people could do so if the bicycle was used to get to the driver's home or rendezvous point. Ideally, such a study should be done within the context of a study into making better use of motor cars, in particular making it easier for people to share cars.

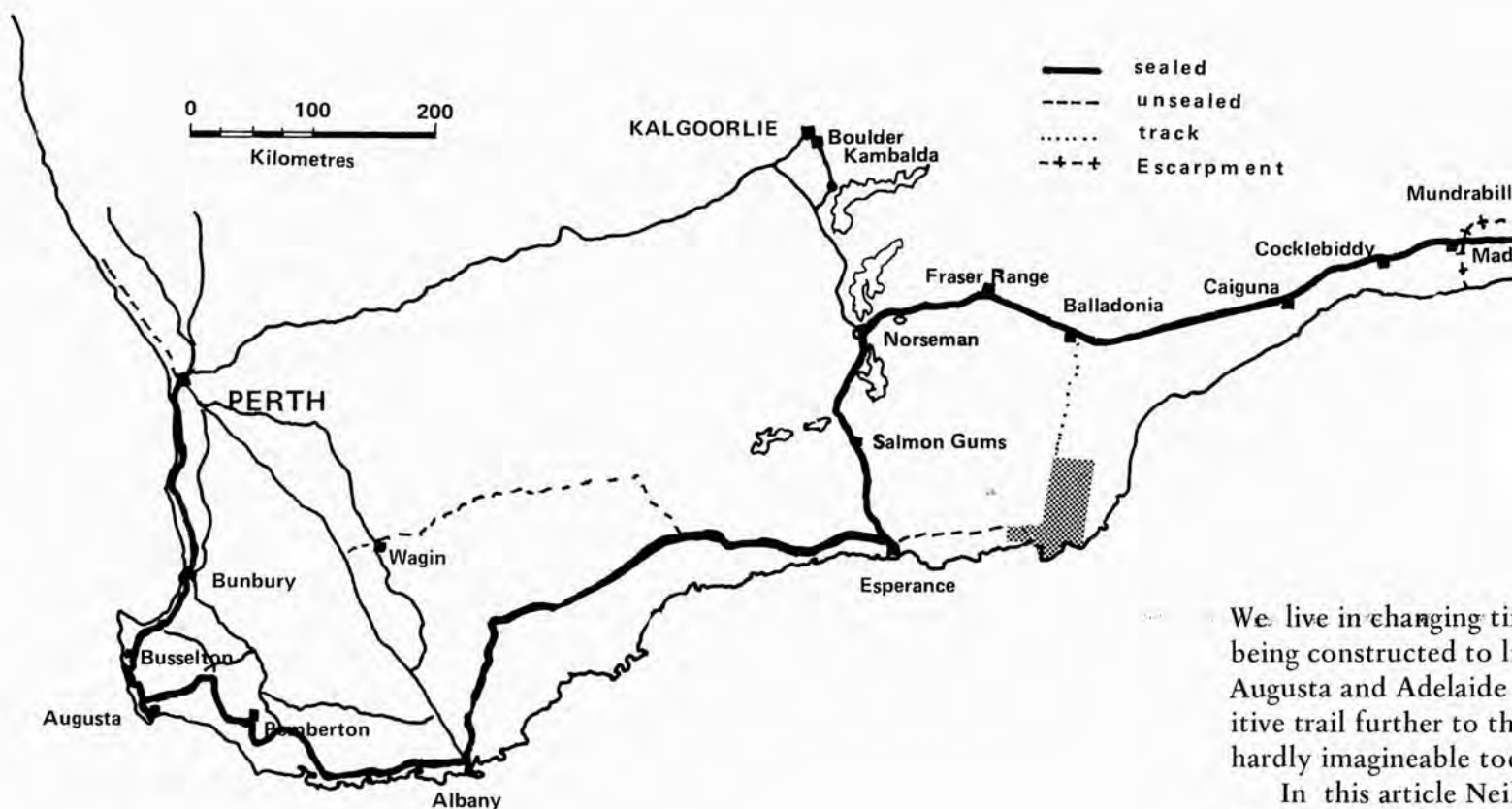
Today in Australian cities the average car occupancy is only 1.3 (including the driver). If it was possible to raise this average by merely one passenger, free-ways would become superfluous, road congestion would disappear, and petrol consumption and air pollution on busy streets would fall to about half their present levels.

Once political constraints are lifted, some way of providing an incentive for people to share cars will be found. Once this has been done, the way is open for using bicycles to overcome one of the main hassles the drivers of shared cars have — that is picking up and putting down passengers at their homes. Using bicycles to get to the driver's home, then putting the bike on a rack is one way of overcoming this problem.

Above: Loading up Bay Bridge Commuter Bicycle Shuttle at shuttle stop in front of MacArthur BART station in Oakland. *Below:* Car rack for up to three bicycles.

1 2 3





We live in changing times, being constructed to last. Augusta and Adelaide, a positive trail further to the hardly imagineable town. In this article Neil traveller. The heat and circus in a post petrol

A Nullarbor Crossing - D

A cycle of the Sydney to Perth variety becomes very complicated. So many events arise it's impossible to recall them all. No matter at what rate a person may cycle it, the distance itself presents a rider with ongoing questions. Two years after riding from Sydney to Perth via Griffith NSW, Adelaide, Esperance, and the south-west coast of Western Australia, three features stand out. They remain outstanding because they required the most attention during and after the ride: food, other drivers and the desert. These force themselves upon a rider every cycling day.

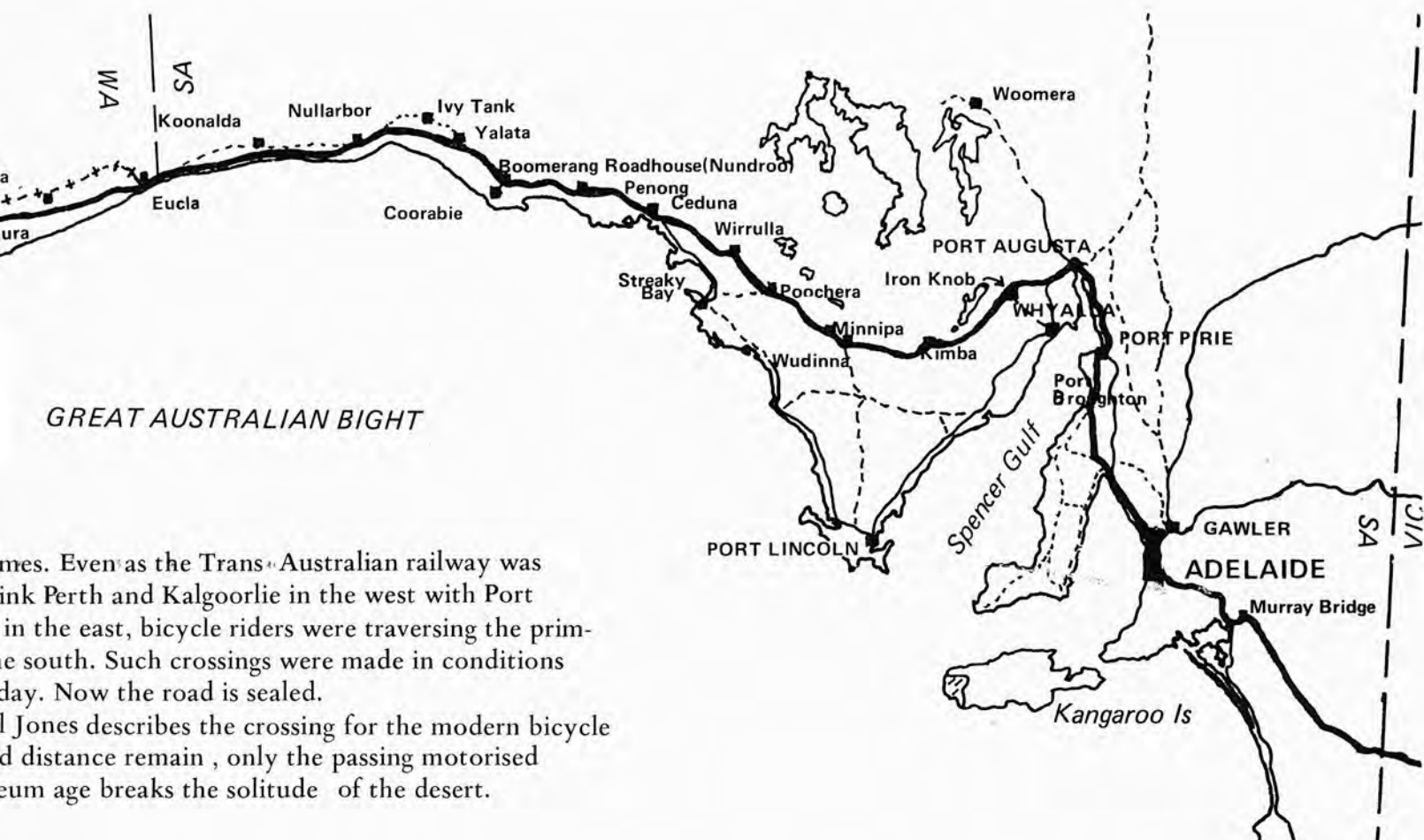
Noel McFarlane and I spent 7½ weeks pedalling 6 000 km to Perth between mid-November 1977 and mid-January 1978. Not more than 80 km were dirt roads but as the thousands of kilometres pass the ride becomes a personal epic. Incredulous motorists and the immensity of the desert encourage a certain "heroic" veneer to the endeavour. But pragmatic decisions over repairs and daily riding distances make the cyclist's role matter of fact.

Riding the ribbon of bitumen with the infra-reds and the ultra-violets making a bare backglow, the arid regions of South and Western Australia are all-consuming in their demands. There are weeks for talking out and enjoying the motivations and rewards of the ride. It's being "on the road" in it's most clichéd sense. A way of life emerges familiar to all cycle tourists. It's all too easy to get caught up in the continual movement of people. Highway One between Port Augusta and Norseman is a tidal channel of travellers devoted to one thing — getting across the desert in the shortest possible time. Speed on a bicycle gets limited daily distances compared to gas-guzzlers, and edible fuel is hard to get. Food for much of the time is the first consideration. Heat, dehydration, drops in energy and motivation combine with hundreds of kilometres in the saddle to put heavy emphasis on diet.

The role of food is extensive in the Adelaide to Norseman section and other dry country touring. In its perspective this section is an immaculate road surface only marred by a crumbly piece south of

Panorama showing escarpment near Eucla Pass, central N





mes. Even as the Trans-Australian railway was
link Perth and Kalgoorlie in the west with Port
in the east, bicycle riders were traversing the prim-
e south. Such crossings were made in conditions
day. Now the road is sealed.
l Jones describes the crossing for the modern bicycle
d distance remain , only the passing motorised
eum age breaks the solitude of the desert.

Diet, Drivers and Desert

Nullarbor.



Port Augusta. The carriageway is a high quality, broad surface topped with fine gravel, it usually has good shoulders and plenty of room for cyclists and other traffic.

It is 2000 km of dry, riverless, creekless country. Water stops are tanks, waterholes, small wheat towns and solitary roadhouses. The 1200 km between Ceduna SA and Norseman is a chain of fast food take-aways every 100 km or so. Sources of food (food substitutes?) are never more than a day's ride away. Tailwinds can reduce these distances to little effort as 100 km can slip past in less than three hours on this flat desert road. Water presents no problem if carrying capacity per rider is about 12 litres. Solid food is the problem as the excess fat burns away.

Buying constantly from roadhouses results in two things — a burning in the pocket and a loss of nutrition because of the poor variety of foods and the lack of fresh fruit and vegetables. Keeping up the diet with five steak sandwiches a day contradicts the cheapness of bicycle travel.

Providing a nutritious basis for the desert road can be done with a tasty selection of dried foods. Supplementing these with fresh veges at Ceduna takes away the blandness of a dried food diet. Herbs, spices and loads of garlic make good flavours possible. Adelaide is the last opportunity for buying a good variety of fine dried goods. To cart the quantity necessary for the desert meant sending it on to Ceduna by truck, 25 kg of rice, muesli ingredients etc., were the result of a buying spree at Clear Light Whole Foods in Rundle Street, Adelaide. A truck agent at Gepps Cross just north of the city will despatch that quantity to Ceduna. At the time it was very cheap.

We weren't experts on nutrition and suffered occasional losses of energy for various reasons. Taking precautions by planning a diet base for the ride can mean the difference between ecstasy and agony. We have since learned a lot about bodily needs during high daily distances on long rides. Breakfast is the meal which should provide the day's energy needs. A super muesli mix is an excellent source. What can be included are lecithin to aid the release of energy in the breakdown of sugars; oats, nuts, dried milk and fruits to provide bulk and energy, in the form of cellulose, proteins, sugars and oils. Oils and fats contain more than twice as much energy per unit weight as proteins or carbohydrates but quick energy is best provided by sugars.

Most vitamins and minerals can be provided by a well-thought out muesli mix as well. The B vitamins are well catered for in the above but vitamin E is of particular advantage to heavy breathers including puffing cyclists. Vitamin E does the job of aiding the metabolism of oxygen. Body cells make more efficient use



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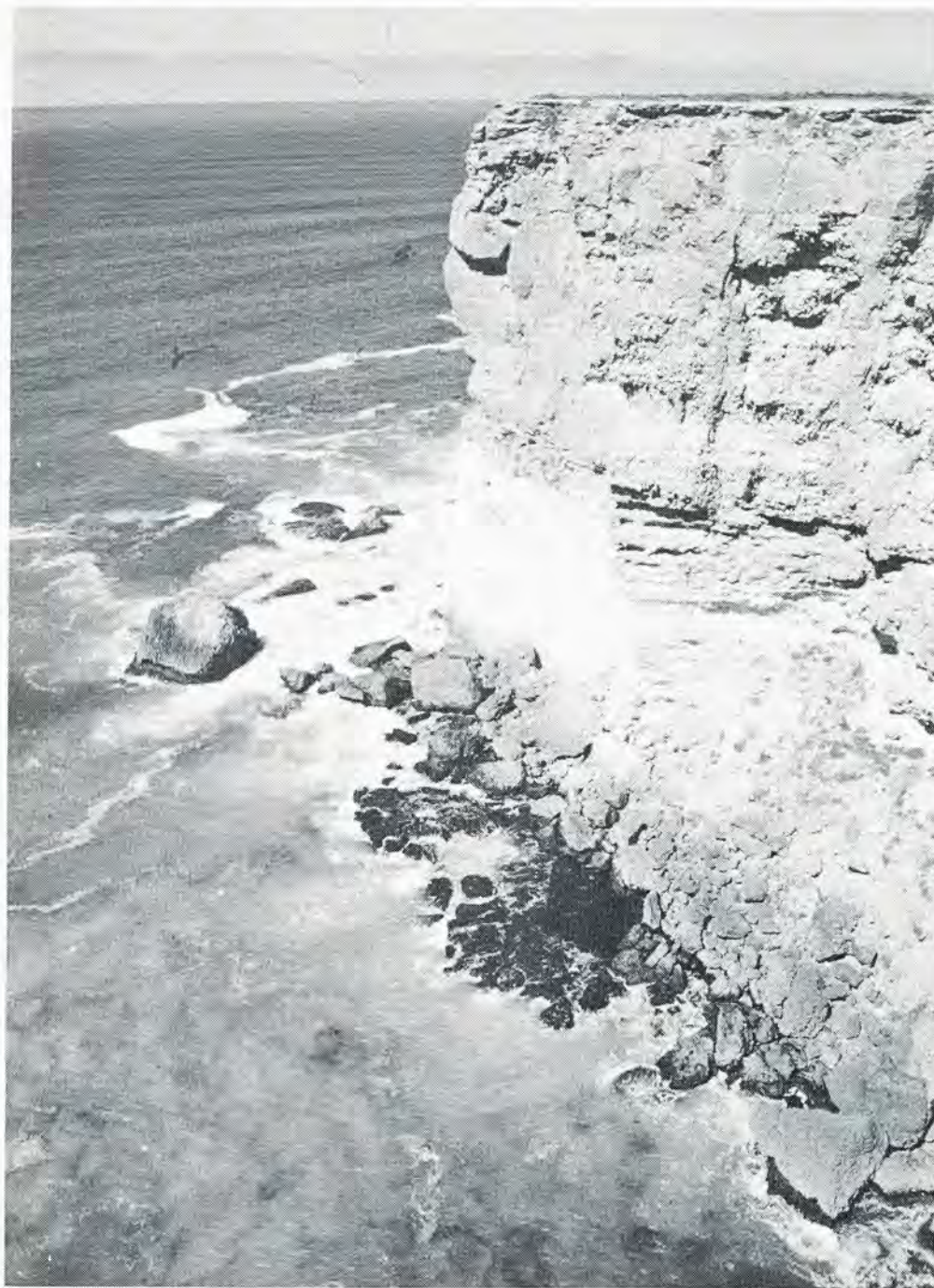
of oxygen in the presence of vitamin E. Wheat germ is an excellent provider of vitamin E or you can use multivitamins. Just E caps are worthwhile too.

There is really only one other big meal on the desert, and that's the evening bake up. It's really just too hot to eat big meals during the day. Evening cooking can also provide the energy snacks for the next day. Noel and I would spend up to three hours each night cooking and eating as the results came off the fire. Much of the time was taken up with making pancakes and damper twists. The latter are made of damper wrapped around the last 20 cm of a small branch and held above the fire to bake. Excess pancakes and twist became the bread substitute and a delight of their own when stopping for a billy in the day. Soy burgers are great eating too. The soy beans have to be soaked for a day which can be done by one third filling a Golden Syrup container with beans and the rest with water. They're easily carried during the day's ride and at the campsite can be added straight to the frying onion and carrot etc or mashed with flour, soy sauce, and powdered milk to make soy burgers for frying. They can turn the most avid carnivore into a vegetable stalker. Greyhound trainers have a healthy respect for the humble soy-bean as well.

Salt replenishment is of course, of extreme importance. The most recent advice on this recommends the replacement of salt at the end of the day's activity. Individual differences and experience will determine the immediate needs of the cyclist on the day. Replenishment during the day may be needed to avoid acute cramping but must be accompanied by lots of water. When a person sweats, the concentration of salt in the body increases. This is because sweat contains less salt than the cell tissue. Consuming salt during the day further raises the body's salt concentration causing further retention of fluids, ie less sweating. The correct level of salt must be maintained by high water consumption, as it isn't the drinking of warm water on this road which cools, but the sweating which follows.

When energy begins to flag, biscuits, glucose or if you want to stop, Aktavite in powdered milk with Golden Syrup are great restarters. On rides of this length and doing 200 km a day, the natural appetite becomes inadequate. The body develops great strength and requires seemingly less effort to keep going. Eventually the appetite doesn't reflect the actual food needs. Eating becomes a constant necessity even when there is no hunger. Every roadside stop is a snack break to keep up that energy supply. Loss of energy and motivation are felt very quickly if food consumption gets too low.

After reaching Ceduna and picking up



The sea undercuts 100 metre cliffs of crumbly limestone.

the swag of tucker, it was divided into two lots, one slightly larger. The 500 km to the border need only be a three-day ride in good conditions. There is a courier between Ceduna and the border so the larger portion of the load can be sent there at about the same price as for the lot coming from Adelaide. A delightful morning can be spent in Ceduna sorting the goods. We had to mix our muesli on the spot. Two small hillocks of it grew from newspaper spread on the caravan park gravel. There aren't many sights more appealing than the 50 cm mountains of muesli destined to power us the seven days to Norseman.

Of course eating what might look to some like poultry feed for a week may not seem attractive to many. But with all

those shrines to modern architecture in the form of roadhouses, you can vary your diet in good or less healthy ways. You come across the odd fresh apple, and there's always the frozen 600 ml cartons of flavoured milk which endure as the most satisfying ice blocks of all.

A dry-country cyclist can't finish a segment on diet without paying homage to the billy of tea. Whatever precautions taken on such a ride, a primary one is to keep all tea-making apparatus very handy. Take time whenever the chance arises to have a cup of tea. A hot cup will cool you down most pleasantly and quickly. Evaporative cooling while standing still, and enhanced with every mouthful. There is always firewood and a little planning of tea stops makes sure of times for relaxation in the day. If not normally a sweet

tea drinker, it's a good idea to add sugar or honey to maintain body fuel. Six cups can go down very easily at a sitting. A second boiling of the billy may be required, but on the Nullarbor the water is prewarmed.

Drivers

The greatest risk a cyclist takes is mixing with cars on the road. Cars and trucks between Port Augusta and Norseman have time and space to see the rider and share the road. They become more an energy drain than a risk. The road is of superb quality, the builders haven't scrimped on giving it width, it's a far cry from the urban cycling scene.

The urban motorist/worker consumes 10 to 30 per cent of income on the car. The amount of taxes spent by every person on cars is another matter. Bicycles for the committed cyclist are no such drain. The three months or so spent each year by the car owner using the car can be used by the cyclist much more 'productively' and recreationally. The car is fast becoming a millstone round the car owner's neck, the albatross of the modern mariner.

In this light, the reactions of the majority of motorists to the long-distance cyclist are a contradiction. It looks like so much hard work to so many to be on a bicycle loaded to the hilt with water, spares and food. But even the act of cycling on that desert road, in less than objective terms, seems easier than the car ride. Having driven the same route by car in 1974, I know the drive could never compare to the cycle.

Firstly, the cycling gets you fit. By the middle of the day as the temperature begins to soar there are usually 130 km done. The roadhouse reached by that stage would be welcome but not obligatory. In the act of stopping to rest we could only feel extremely comfortable in the dry heat. For the bulk of motorists however, the first stage of heat exhaustion was developing. Basting in poorly ventilated cars, many appeared incapable of enduring the demands of the road. Their disbelief in a person's ability to cycle in such heat was based on all-too obviously false assumptions. Moving through the air at 30-40 km/h, the evaporation of sweat cools effectively in temperatures up to 40°C on a dry flat road. You are your own engine, the water used to cool you is not passed back into your system to gradually accumulate heat. The motor car however, acts like a solar cooker as well as distributing engine heat into the cabin. The plastic upholstery, limited airflow and a motorist's tendency to be unfit makes for a very uncomfortable form of transport. To have worked three months of the year solely to spend days crossing the desert in the most uncomfortable way is a heavy price to pay for speed. What beauties of the desert that are missed by this high-



Ruins of old telegraph station at Eucla.

powered mode of travel will become obvious.

Now the desert road for the cyclist is very beautiful. It's not depressingly flat, but it can be very straight at times. But, it is a desert; and desert life, when it shows, is beautiful. A cyclist sees much of it, a motorist sees little, at 110 km/h, hour after hour, things look very much the same. Few drivers, fresh on the road at dawn, will wave to a cyclist. It's early, the day's drive still has a tinge of excitement. The hours go by, the sun gets higher, the kilometres go past more slowly.

Gradually more people will wave to break their boredom. Eventually the cyclist loses the extra energy to return the waves. The cyclist becomes more discriminating in replies. The index finger raised off the wheel is soon ignored, the crisp one-handed wave loses favour; by midday only the frantic waving of both arms by enthusiastic kids gets the smile and wave back. The cyclist becomes . . . antisocial.

Very strange and funny things happen with the motorists. Some seem to go crazy. The last day into Norseman, a Kombi was approaching. As it came closer there was a weirdness about it. The driver was aiming a movie camera through the door window. God knows who was keeping the van straight, the driver certainly wasn't. Then there were the six young surfers heading west in two cars, the V8 Fairlane being towed by the Falcon. The Fairlane had broken down in Wilcannia, NSW. They caught us 300 km into Western Australia, still towing the Fairlane and puzzled that now the Falcon should start overheating.

But there are the offers of cold cans of beer and soft drink, etc, which can't

be refused. One couple drove beside us for a way to give us an ice block. The heat was just starting to slow us at the time. That shared ice block must have dropped out body temperatures five degrees and sped us up a good 10 km/h. The strange behaviour of many a car driver must be contrasted with the generosity of others. Their form of transport however, is just too fast. Faster than the speed of life, the hundreds of dead wombats by the road attest to that.

The Desert

From Adelaide to Norseman there is not one running creek on a sunny day. It's dry all the way, but for the still water across the road near Kyancutta, east of Ceduna, a pool left over from rains the week before.

Most people travelling on the desert road are a little scared. Scared of breakdowns or running out of money before the next bank. The desert still raises that primeval fear of the power of the natural elements. For the cyclist there is the fear of the heat, and if heading west, fear of the north-westerly winds blowing the heat from the inland into your face.

Having left Adelaide in early December, after a gallop across the eastern states, heat was already becoming a problem. Leaving Highway One, to follow the coast through Port Broughton to Pirie, the mercury soared. Over 40°C and no relief, but for ice blocks and douches of water in each town. Port Broughton provided a respite for the hottest hours. The luke-warm waters of the gulf don't cool you, but the kids know what does. It's jumping off the pier and running back up the stairs again, getting the rush of air over a wet body for evaporative cooling.



Desert cyclists: *Left* Noel at SA/WA border *Right* Two cyclists met along the road.

When it gets above 40 degrees, cycling can begin to be unbearable. If the heat is dry you may go further but ultimately, it's stop or ruin yourself for the rest of the day. Were such hot days to continue, cycling the desert would be miserable for much of the time. But in every day there are the cool hours, and the very hot days seem to come one at a time, or at most two or three together.

Seven days between Adelaide and Ceduna is not difficult after the training of Sydney to Adelaide. Port Pirie to Port Augusta gives the first glimpse of the real desert country. The southern end of the Flinders Ranges to the right look like Namatjira paintings in the early light. Port Augusta itself is a mess. A sprawling suburban cancer, with a half-hearted freeway bypassing the main town. The comments of locals on what to expect of the Aborigines point to a town rife with racial hatred. Such comments from motorists as well became a recurring pain.

It's a pleasure to turn left and head west. The desert literally beckons. The road suddenly opens into a great expanse, dying to be crossed. The sensation is a magnet. For a cyclist, it's a very special feeling to be launching onto such a road, helped possibly by the continual riding into sunsets.

On a bicycle you are sitting high, the view stretches to infinity. The air is hot and dry, the hills gradual, short, and a little graceful in their curves. The cycling effort is minimal and once you realise this, there is time for turning concentration to other things. Port Augusta to Kimba is semi-desert, beautiful hills to the north and the weeping sore of Iron Knob on the left.

Kimba to Ceduna is punctuated by wheat towns every 80 km or so. Each day

is marked by a morning or lunch stop in the shadow of the silos. December 1977 was before the end of a two-year drought. The silos hadn't been more than a quarter full for two years. This was marginal wheat country at its worst. The locals, nevertheless, are very friendly and willing to talk.

Leaving each town a huge green sign lists the towns still to go before Ceduna. At Poochera the only town left is Ceduna. The last 15 km were in the fading sunshine of a cool afternoon. Having spent the hot hours at Poochera community pool, the cool was a pleasure to cycle in. Noel and I let go, racing the 15 km in seemingly as many minutes, just to shake off the leftovers of the midday heat. My back became covered in white salt crystals. It's so dry the sweat doesn't have time to run.

The last day before Ceduna, there was heat in the air. An early morning start was obligatory. The local parrot, the Port Lincoln parrot, blue, green and yellow, filled the roadside scrub. They have flourished in these parts with the growth of the wheat industry. Wirrulla is the only town left before Ceduna, 100 km away. Leaving Wirrulla the sun was turning on the heat but our tempers soared further as tourists in a passing Kombi hurled an egg at us as they passed. Not looking forward to the hot ride we were tempted to cycle back to the police station we saw on the edge of town. Nevertheless, we dug into the ride, as this day progressed to being the worst day of the trip. Still with 70 km to go, the north-westerly was blistering. It was 45°C in Ceduna; it must have been 48 out there. The country was wide open.

This wheat country has many two or three km climbs. At the crests of these the view is always immense. Miles of

wheat and scrub stretch in all directions; mountains in the distance toward the coast. The depth of view is staggering with the illusion of being on the peak of a great mountain.

But 70 km from Ceduna, the panoramas are harrowing. With eyeballs seared by the burning wind, the open country ahead provides no cover for a couple of kilometres. Noel was ahead and out of sight, the next clump of scrub seemed the only respite. Pulling off the road, stretching the tent as a canopy between the trees, the five litres of water didn't seem to be enough for the long wait for the cool change.

Noel meanwhile had pushed on.

I hung out under the tent with letters to write, sipping warm water and sucking on hot oranges. Ah. . . the life of the desert cyclist. After a couple of hours the cirrus clouds appeared in the north-west. Soon puffy cumulus were on the horizon. The cool change was on its way but still no relief. Another hour and there was a noticeable drop in temperature, back on the bicycle for the last stretch into Ceduna and the coast again. The prospect of getting this type of weather on the Nullarbor was frightening.

People have been in it, though. Pat Farrell and a group from Sydney were languishing at Nullarbor Station in 1976 in 48°. The fears of heat for the desert cyclist are very real.

The food was collected at Ceduna and some fresh veges bought. A day was spent to pack it up. Two nights in Ceduna and you become a local. The world passes through Ceduna every night. During the early morning motorists escape to avoid the midday heat, running scared before the light. An aside for wind-wary cyclists. Caravanners get into headwind raves too. Winds can blow them around,

pushing petrol consumption right up and speed right down.

West from Ceduna the road stays close to the coast. A mild morning, clouds and the sea breeze. Very pleasant cycling conditions. Penong is the last town, a myriad of windmills. The country becomes visibly drier, and people keep telling of two cyclists up ahead.

That evening we ran into one of the cyclists, Greg, from Melbourne. Greg was hitching back to Ceduna for money and food. Catching up to them in this way was unexpected, demonstrating how we are dependent on shops to survive. Being near the Yalata Aboriginal Settlement at the time shows that this land isn't so desolate at all. People have been living in it for thousands of years.

On reaching the Nullarbor Plain, no doubts remain of where you really are. A huge flat plain ahead and an equally huge sign from the Main Roads Department declare your presence on the treeless plain.

Capitalism has overtaken the petrol stops since the sealing of the road. One man owns a few of them and will personally refuse water to the cyclist. Prices for cold drinks and milk of course, are sky high. Fifty km from Nullarbor Station there is a regularly-filled water tank. A cyclist can remain independent of the roadhouses.

On reaching the Nullarbor the experience of a desert starts to tell. Hair becomes straw, dust coats the body and washing is impossible. Soap coagulates in the body hair with the hard borewater. Small inconveniences to be in such impressive country.

This is one of the glamour rides of Australian cycling. This becomes the big one, 1200 km of nearly straight riding, racing the weather patterns, covering as many kilometres in a day as possible. But it is all so apparently easy; once on it there is only one way to go.

Reports of the weather in the west are provided by motorists who have just passed through it. It looked good for at least the three days to the border. Riding for the coast from Nullarbor Station into a golden sunset, wombats were grazing off the road and things were very rosy. The desert is alive in these cool hours. Not many animals about, but colours of rocks, flowers and scrub in the golden light show life enough.

At the coast there are lookouts 600m off the road. It's the edge of the plain and edge it really is. The sea undercuts 100m high cliffs of crumbly limestone. The lookouts are suspended above the water. It is the brink. So much so that John Eyre, the first white man to trek this route wrote in his diary that on reaching these cliffs and seeing the awesome drop to an uncompromising surf, he ran back from the edge in horror. Considering his lack of water and loss of fellow

travellers to the spear, his reaction is well understood. The cliffs force upon you the reality of that brink between life and death and pleasure and pain. Cyclists have been accused of not knowing the difference.

Perth newspapers in rubbish bins are signs of our westward progress. The evening breeze was chill and after a two-hour cookup we wandered off into the tussocks to sleep.

At the Nullarbor it's another day to the border. The daily distances from Ceduna were around 200 km. The lookouts all the way to Eucla have to be seen. At one we ran into Greg's cycling companion. As we were enjoying a cup of tea, Greg arrived on the back of a motorcycle with money and food, but not really enough to get them to Norseman. For them the ride to Norseman became a real hustle for food from generous motorists. They did so well they were eating better than us — pork chops, fruit cake, etc.

The border came after a long day. The summer solstice was four days away, the daily milages beginning to drag. Drops in energy levels were beginning to worry us. Advice from a friendly car driver showed us that it was loss of appetite which couldn't keep up with bodily demand. We could no longer trust hunger as an indicator of food needs. Cramming ourselves with food at every stop became the only answer, recuperative cups of Aktavite and three bowls of muesli a day.

The old telegraph station at Eucla offers great camping if the sand is no irritant. The early settlers cleared the scrub from behind the beach allowing the westerly winds to blow the sand up into huge dunes. Appropriately the dunes are now burying the old stone buildings because of their builders' mistakes. There is marginal wheat country east of Ceduna in the same condition. From scrub to sand in 100 years.

From Eucla the road heads inland, over 700 km to Norseman. This is the stretch which could most easily cook us as we get away from the sea. Eucla Pass began the day's ride with a 100m drop off the escarpment of the Nullarbor Plain onto another flat and equally sparse plain. A straight ride across this plain to rise 100m on to the escarpment again 150 km away. On the other side lies Madurah, once a pleasant little hotel with out-buildings, it now sports another of these hideous roadhouses.

The weather was superb all day. A steady 30 km/h tailwind blew us 200 km in about seven hours. The campsite 15 km west of Madurah was made with two or three hours of light to spare. Cooking was done with a vengeance as Noel created the largest twist in the southern hemisphere. The next day the tailwind was blowing before we even hit the road. Stepping on the bikes and slipping up

into top gear (115 inches) for the rest of the day seemed so easy. The only problem was that the flies managed to keep up with us in the following wind. The occasional fly up a nostril was most disturbing to our pedalling cadence.

Five days on the desert and it was feeling like home. Nearing Caiguna on the fifth day, one of the magical sights of the desert reveals itself in harsh splendour. In salty grey, miserable country, six or more wedge-tailed eagles were at post on both sides of the road in dead withered trees. As we passed them each bird rose up, their craggy, angular features silhouetted in the glare of the midday sun. These birds exude the hard beauty of this desert. Caiguna was a welcome stop as the temperature was beginning to soar. The tailwinds were continuing but the temperatures were climbing.

In the cool of the late afternoon we cut into the long straight. Dead straight for 130 km. We camped by a water tank with 90 km to go. To obtain water from it, the vandal fence had to be scaled and a billy lowered on a string into the tank water. There was no water coming through to the taps outside the fence.

Cyclists should be wary of these water tanks. Animals, mostly birds find their way into them and can't get out and lie dead in the water. The West Australian Government often threatens to remove the tanks because of damage by vandals.

Tailwinds again on the sixth day, the straight ends with the curves and hills of Balladonia. With the temperatures again soaring the borewater showers at Balladonia manage to wash away the heat. Each day the distances were falling quickly. The speed of the ride was impressed upon us when we got talking to a Kalgoorlie bushman walking a couple of camels home from Alice Springs. For him it was a six-month walk doing 50 km a day. He thought we were moving too fast.

In the later afternoon we headed for a water hole the camel driver had told us of. Newman's Rocks were only two kilometres off the road. It was an outcrop of pink granite which still held a pool of rainwater from the last shower. The granite glowed red with the rest of the sky as the sun slowly set. The pool gave us our first chance in two weeks to immerse ourselves in fresh water. The pores could breathe again. As the light faded emus and kangaroos came down to drink.

The seventh day was the last. Norseman lay 140 km down the road as the end of the driest country approached. Another 1500 km of coastal roads through Esperance to Perth were ahead, but the ride seemed all but over. The arrival in Norseman was mildly ecstatic. It was a shower, a counter tea that didn't touch the sides and farewells to the Melbourne riders as they headed north to Kalgoorlie.

Equipment



Gear carried by Neil Jones on the Adelaide to Norseman trip.

Spare

Seventy-plus spokes,
spare cluster (14-24 for the plains,
14-34 for hillier country),
spare chain,
two rear axles with cones,
two gear cables, two brake cables,
one can WD-40 with tube for getting
into tight places,
set of pins and washers for

Stronglight triple crankset,
two tubes (high pressure),
thornproof tyre for rear wheel,
two sets 1/4" balls, set 3/16" balls
spare headset.

Tools

Two cluster removers (Shimano and
Suntour), 25 cm shifter for turning
cluster removers, 15 cm shifter, bot-
tom bracket locking ring tool, cone
spanner (Clipsal brand for strength),
Primus high pressure pump, multifit
spoke key, pair of pliers, file, one
Phillips head and one straight head
screwdriver, grease, large sheet of
tube repair rubber, large tube of glue.

Food

Muesli mix: wheat germ, mixed nuts
mixed dried fruit, lecithin, rolled oats
unprocessed bran, Weet Bix, coconut,
powdered full cream milk, sunflower
kernels, sesame seeds, dried apples.

Cooking food: wholemeal flour,
baking powder, salt, Golden Syrup,
rice, soy beans.

Cooked foods: pancakes, damper,
twists, soy burgers, muesli cooked in
powdered milk (delicious).

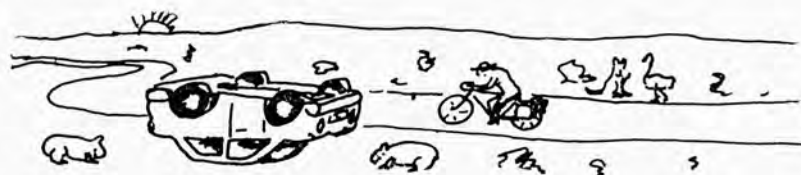
Herbs and spices: paprika, cayenne,
turmeric, soy sauce, kelp powder,
rosemary, salt and basil.

Fresh food from Ceduna: carrots,
onions and potatoes, all of which
carried well for the crossing.

Drinks: Akta-vite and tea.

Other gear

Wide-brimmed hat, sun visor,
cleated cycling shoes,
two 4.5 litre water containers and
two litres in water bottles
pair of sunglasses.



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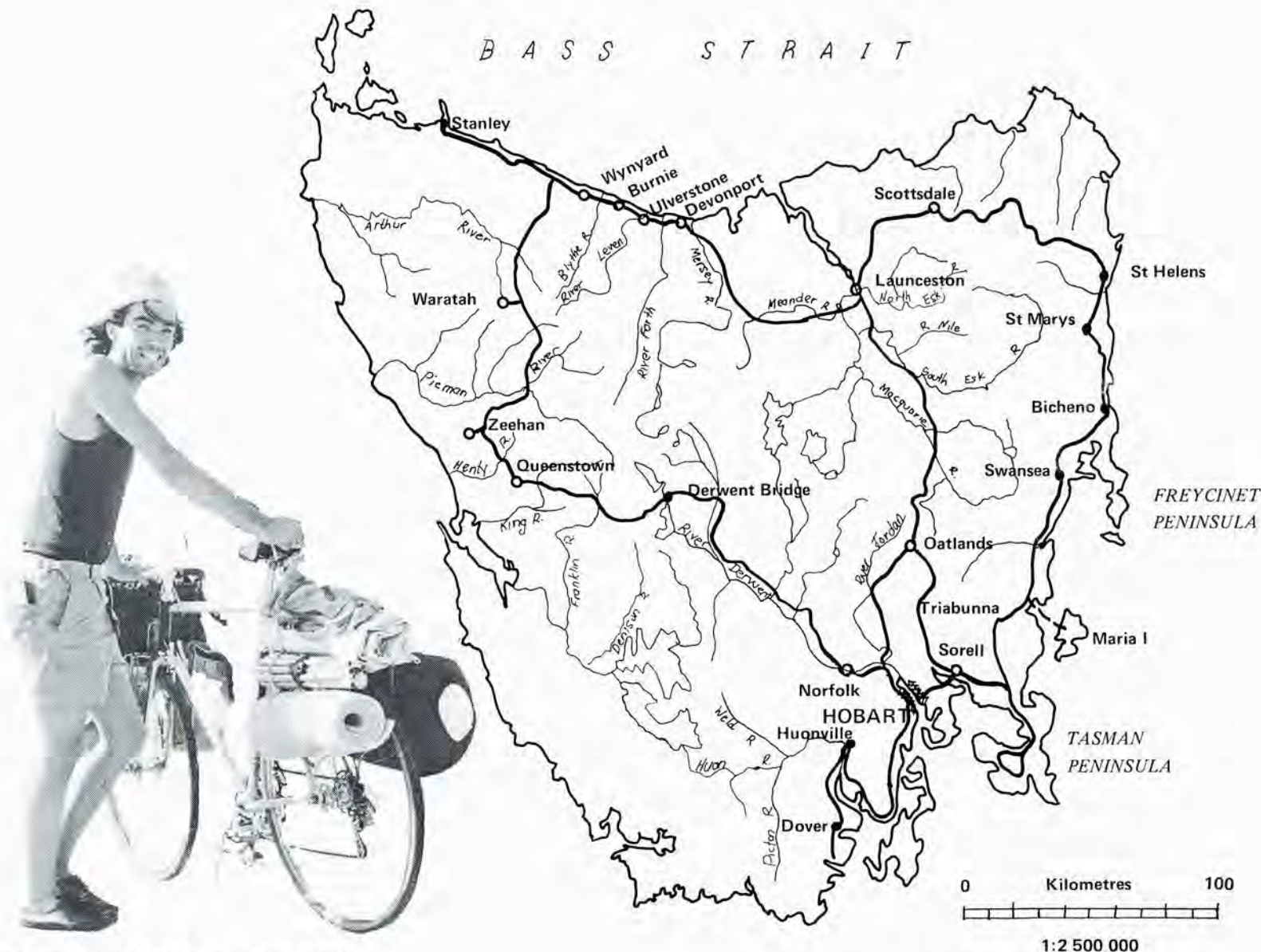
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Author on the road. Note lack of rear panniers
"who needs them!"

Taking Tassie Solo

By Greg Bousfield

As the ferry nudged its way into the Devonport terminal a comment penetrated my early morning nausea - a result of a sleepless night and the free Australian National Lines (burp!) breakfast - a comment which was to echo in my ears for weeks: "Yes, it's fine this morning," she said, "but we could go through all four seasons before the sun goes down." A commonplace statement you might think, but fraught with significance for the Tassie novice, especially one on a push-bike. A beautiful starry evening, you lie down in a soft grassy field, muscles pleasantly aching and watch the moon rise over the forest. And several hours later wake up soaked.

Anyway, back to the story. That first day started, as she said, with sunshine. Less than energetically (still suffering) I pedalled west towards Stanley across fairly flat ground, a light tail wind drying the sweat on my singlet. Then the horizon

turned grey and soon I was cycling in a low, damp cloud through Ulverstone and Penguin past a rather foul smelling titanium plant, Burnie (cloud getting lower), Wynyard and into Stanley. Next day (still raining) I dutifully climbed The Nut, a prominent hemisphere of granite or something which pokes out impressively above the town. Just about as impressive as the \$2.30 I paid to prop my 1½-person tent up in the caravan park. And oh, 30c for a shower, thanks!

The next few days were to be the toughest part of the whole trip and my introduction to the west coast about which I had heard so many horrendous stories.

The first section was wonderful. I took on supplies at Wynyard, which is a reasonably large place and had a really enjoyable run southwards to Yolla. Hues of green and rich chocolate brown farmland spread over the short sharp hills, Bass

Strait still visible over my shoulder.

Hellyer Gorge was my first real full-tilt Tassie steep grind. Because it is a gorge the good bit comes first; a very exhilarating, sometimes hairy descent to the river through light rain. A short breather at the bottom to take in the river and the forest then up! A very long snake of a climb. Jaw set at the appropriate angle, snort and grunt. About lunchtime a headwind blew up so I piked and spent the afternoon drinking Cascade Stout (recommended for stout freaks - a good 50 grade bituminous brew that doubles as a chain lubricant) in front of an open fire in the Waratah pub discussing weather patterns with the local tin miners and bullock drivers, a very wild bunch. That night was bitterly cold - hard to appreciate now sitting in 35 degree heat in Perth - and the following morning was not exactly summerish either. Painful. South of Waratah the road

lopes over low sweaty hills through dripping green rain forest. There appeared to be a bit of forestry activity down this way, the odd logging truck hissing past, but very little other traffic. As I changed gears halfway up a hill my chain failed to engage the smaller chainwheel and I, strapped to the pedals in cleated cycle shoes, keeled over. Fortunately it wasn't serious and it was the only bingle I had on the trip. I met another guy a few days later who went off the edge of the road somewhere on the east coast and ended up in a ditch, kissing goodbye to the front end of his bike (he was okay).

Just as I was getting over my little fall the famous Roseberry Hill came into view and before I had a chance to collect my thoughts I was panting and grunting up probably the meanest climb on the island.

To really appreciate the flavour of a cappuccino coffee, climb that hill on a cold wet day, rocket down into Roseberry and stop at the small roadhouse on your right. Superb! Northbound cyclists are warned against drinking one before the climb.

Forward! The Zeehan museum is reasonably interesting but nowhere near as inspiring as the rugged beauty of this part of the island. I found the towns and mining communities dull, grey little places though; epitomised by Queenstown with its lifeless hills denuded by sulphur fumes from the nearby copper smelter. Not a pleasant place on a rainy day. The locals are usually friendly and having spent most of my life in a city it is a pleasure to be greeted in the street and to indulge in easy-going conversation with passers by. In Queenstown I bought a Swandri, a New Zealand garment like a long shirt made from waterproofed wool which I found excellent for wet weather. It doesn't get sticky and humid like a

synthetic. It does absorb water in heavy downpours but this doesn't matter a great deal since wool is warm wet or dry.

I cycled out to Strahan, one of the few settlements actually on the west coast and famous for Port Macquarie where the worst convicts were once sent. I took a cruise up the Gordon River on the Matthew Brady which cost me \$12, crayfish lunch included. Not bad, a little boring at times perhaps (not the crayfish lunch though, a change from Vegemite sandwiches).

A clear afternoon and evening heralded as usual, a lousy day; heavy drizzle punctuating a light grey drizzle. The Swandri proved itself a winner on the tough challenging run from Queenstown to Lake St Clair. Some of the best Tasmania has to offer in terms of powerfully beautiful hill country is along this stretch of road. I enjoyed it all despite the rain and really numbing cold that bit into my feet and hands.

That was the last cycling I did for a week. After a two-night stand in a forestry hut at Lake St Clair the Viscount and I caught a bus to Hobart. The rain and cold precipitated in me some kind of incapacitating virus. Thank you Bid and Rod for the use of your comfortable house. I'll never forget that first hot shower.

Clear skies! South along the coast inhaling a lot of good salty ocean air and other joyous sea smells! Excellent tonic for the recuperating Piscean. Apple country this; a couple of months too early for free bicycle fuel though.

I tackled some really good coastal gravel roads near Cygnet (about 50 km south of Hobart). Recommended. One thing about gravel is that there's usually a lot less traffic than on your average sealed racetrack, which increases one's

scope to indulge in a bit of freeform cycling. Explore the whole road for the smoothest run. Zig-zag if you like. Secondly, life's a lot slower and quieter without traffic roaring past at 110 km/h, 50cm from your ear. Relax. Get off and walk. Talk to a horse.

Predictably the rain showed up again. Fortunately I'd covered all the ground that appealed to me south of Hobart including a visit to Hastings Coves and a swim in a nearby thermal "hot" pool. A cold thermal hot pool. Don't bother.

So the rain came down in the usual Tasmanian drizzly fashion. Sometimes I'd look up at the sky and demand a decent torrential downpour, something to write home about, but all I got was the same indifferent trickle.

The Viscount and I went back to Hobart in a friendly ute.

Thinking back on my rather peopleless west coast swim, I decided to join the Youth Hostels Association. This move was not made without some reservations mainly for the reason that I've always imagined the YHA to be a bit, well you know, RULES, that sort of thing. Anyway I joined up and was sorry I hadn't done it earlier. Rules, sure. Also having a shower more than once a week, meeting people and reading 1963 Readers Digest articles. Easy to take.

The coast road which runs east from Hobart passes over two long peninsula-connecting causeways until Sorell. A bit further east is a right-hand turnout which I decided to take since it was partly unsealed and hugged the coast most of the way. Unfortunately the suburbs have been moved out from Hobart, taking the form of a series of holiday and weekendertype villages all made up of the ubiquitous beach shack; some of the most revolting examples I've seen of these unimaginative asbestos boxes. My disgust was prolonged when I had the misfortune to take the wrong turning and unnecessarily cycle past several more of those malignant little humpies. Twice!

Soon I was out in relatively unpopulated country again. Beautiful wooded islands in Norfolk Bay eased the pain and I didn't have to work too hard until the hill climb just north of Eaglehawk Neck. This effort was fuelled by courtesy of Tarrona bakery. At the top of the hill the Tasman Peninsula spread out greenly on the ocean before me, a big surf trimming the edges with a white border.

Finally I pumped into Port Arthur where I was amused to see a game of good old cricket underway amid the ruins of one of England's less reputable colonial outposts. Something ironic about that. The old buildings are fast disintegrating, especially the jails and restoration appears to have ceased. Sandstone blocks have been incorrectly laid here and there and the weather has gouged them badly over the years. I stayed a couple of days

Beautiful green countryside halfway down the west coast. Mt Murchison (obscured by clouds) in the background.





*Top:*The west coast: Rain and trucks. *Bottom:*Ecstatic afternoon just south of Wynyard, NW Tasmania.

wandering with a friend along quiet forested tracks and drinking tea in the little restaurant.

The youth hostel had, and hopefully still has, a pot-bellied stove that throws out heat like a Bessemer blast furnace.

The weather dried out the morning I left and the wind backed strongly to the south-west squirting me along at about 25 km/h. I'd previously travelled by car along the main Sorell to Triabunna highway with my friends from Hobart and as well as putting me at a disadvantage with the wind, taking that road entailed thirty or so extra kilometres and some big hills. So I took the dirt shortcut through Nugent, a place which doesn't really exist any more except in the mind of the mapmaker or maybe I took the

wrong turn again. It was a good, smooth, almost hill-free road. On this very quiet backtrack I saw my second echidna, which scuttled away before I could touch it. I've always wanted to find out if those spikes are really sharp or just effective advertising.

I re-emerged onto the main highway at Buckland, mixing with logging truck drivers Hume Highway-fashion, creating a road surface that's more repairs than original road. And keep your eyes open, boy, 'cause you'll need to stop and light a candle for some of those potholes. I camped on the beach at Orford with four southbound cyclists and we stood around at sunset admiring the ocean and telling stories ("that hill - you'll probably go

over it tomorrow - is so big it took us two hours just to go down it . . .").

A brief rainy ride put me into Triabunna next morning and soon I was on the ferry lurching towards Maria Island which is a fairly large lump of forest and rock about ten kilometres from the coast. I had planned to do some walks around the island, which is a national park, but walking had become a bit tricky for me, what with all the cycling I was doing. Couldn't quite seem to remember how to do it properly without having a pushbike in my hands. Anyway my friend - a hitchhiker I met in Port Arthur - and I camped out of the breeze at the base of Fossil Cliff (not recommended as good bushcraft practice) which is about a 1500 m and two barbed-wire fences from the settlement.

A lot of the rocks in this area contain small fossilized shells and other very ancient predecessors of the two fish we managed to catch among the kelp. Glee-fully we fried 'em up for dinner. Terrible. Luckily I had some curry powder on hand to bring the flavour above the level of boiled cycle shoe soles - which would have been less bony, anyway. A tip: beware of the possums in the settlement camping area. Day or night they'll eat, chew or mangle *anything!*

From a lookout just north of Swansea, Maria Island is still greenly visible to the south. Across Great Oyster Bay and the swampy-looking area around Moulting Lagoon, Freycinet Peninsula's rocky, balding hills fold around some very cool, blue bays. Bichenno: I pumped the last twenty or so kilometres down on the drops, shouldering into a slight headwind. Poppy fields, paddocks, the Coles Bay turnoff and finally up a slight slope past a few houses and a sign (which I made a mental note of) advertising fresh veges, into the small touristy town itself. In the hostel log book I found that it wasn't too hard to receive an invitation out on a cray boat and maybe some cheap crays or scallops. If you're a female that is. Unshaven male cyclists try the fish shop on the right for excellent lightly-fried trevally.

Lolling about the beach and resting myself from the rigours of hill grinding, the days slipped past and soon Christmas Eve was under my belt. I had promised to meet some friends up near St. Helens on the 25th and so reluctantly I left Bichenno and muscled north, hissing over wet roads towards the aptly-named Elephant Pass. Firstly the thin inconsequential tail of the beast; climbed adroitly, little fuss about that. Then the size of the animal becomes apparent. An hour or so of negotiating ridiculously steep hairpins, long cliff-edged upgrades all slimy and wet. Little clusters of cars occasionally second-gear past, the occupants probably thinking "What? Christmas Day?" But, as nearly everyone



The aptly named Wineglass Bay and Freycenet Peninsula.

knows, he who goes up eventually must come to a sign saying *Highest Point of Pass*. Unfortunately I didn't find the downhill side as convincing as the climb. Just less painful.

Cars often tooted their horns as they passed and after the novelty of being a novelty rubbed off, a blithe wave or nod of the head became practical substitutes for artificial facial cramp-inducing smiles and similar displays of niceness on my part. In fact I became a bit angry with horn-blowers who seem to think cyclists are stone deaf and that the little involuntary leap out of the saddle I did when they blasted me was part of my riding technique. So halfway down the pass I disregarded an oncoming beep until it came back and passed me again. Turned out to be my friend from St. Helens and, well, being over the worst of it, why not?

Onto St Helens, bike in the back, tape deck at my disposal, soon to be scoffing coffee and Christmas cake while toasting my toes in front of a big open fire.

A couple more days spent sitting around talking or poking around in the bush and the creek, exploring a beehive which I lifted the lid off to find to my terror a vast number of bees. Not surprising when you stop to think about it, Greg. Really. And the leeches! Lie down and have a doze by the creekside and it could be your last.

Probably some of the nicest timber country I've seen anywhere borders the

St Helens to Launceston Highway which winds up from the coast, buckling through gorges and over ranges of hills, making it a very long day's run, especially in bad weather. I lunched in Scottsdale (about halfway) before tackling the Sidlings, a climb worth the sweat for the rich mellow view. All day I had been predicting a tail wind, sometimes stopping to chew over the map, scrutinizing the changing road directions, glancing at the swaying trees, saying to myself: "Yes, yes, just up here, no, there, that's it, the road'll swing around and I'll motor into Launceston, feet on the handlebars." Every time I rounded a bend the wind changed direction, maintaining a steady blast in my face. Or so it seemed. Sometimes I'd escape into a forested stretch riding in calm silence, joyful in my self-sufficiency and strength. Headwinds are like all-day toothaches, unlike hills which offer at least a view or a sense of relief before they evaporate sweat and pain with breezy downhill acceleration.

Halfway through the sunny afternoon a couple of punctures slowed my journey pleasantly. Stop and lean the bike against a barbed-wire fence, stretch, look through the trees. A car buzzes past, a few drifting clouds pass overhead towards far-off hills. The warmth caused by my activity dwindles and I reach for a jacket. Working easily with my fingers the hole is soon fixed and I pause for a while, studying the bike and checking for any loose or

broken spokes. Usually I hear them breaking but once I rode about 15 km before noticing a telltale rattle from the front wheel. I have double-budded 18-gauge spokes front and rear and they're far too light for touring. My weight was distributed with an emphasis on the front wheel and that was where I broke spokes, the back wheel remained intact for the entire trip.

The last 30 km into Launceston is mostly downhill which compensated for the headwind and my — by that stage — jelly-kneed fatigue.

At that time of the year (December/January) Tasmania is in the grip of cyclemania. Not just cycle tourists but interstate and international scratchmen who come to the island to compete in track and road events, mainly in the north from what I could see. Cycle pictures and comment fill the sport sections of the provincial newspapers, occasionally overflowing onto the front pages.

A couple of times I had the hell frightened out of me when silent, black-knickered cyclists in training whirled past on quiet stretches of road.

My Michelin touring tyres were fast turning to canvas after weeks of riding, so I decided to fit some new rubber in Launceston even though I had only a few hundred kilometres to go. Unconcernedly pumping along towards Hobart, new tyres all around, when suddenly

the front wheel started binding and rubbing. Bang! The tube blew out as I grabbed the brakes. Hmm. Some idiot didn't seat the tyre properly. A potentially nasty experience had I been cranking down a hill.

By the time I had hitched back from the bike shop with a new tube and reassembled the whole thing (this time making sure I did it properly) it was mid-afternoon. I pushed the bike to the roadside, leapt on and tore off.

The Midlands highway is flat and busy, although I wouldn't say boring. It was pleasant to be back on the plains. I was able to see for miles again instead of cycling through a tunnel of trees.

Late in the afternoon one of the many cars passing me slowed as it drew alongside and much to my surprise the passenger extended her arm, offering me an apple. Still surprised and wobbling dangerously I accepted, precipitating delighted smiles all round, mine being by far the biggest. In the unlikely event of you reading this ma'am, thanks for making my day.

Next morning I hitched from Oatlands to Hobart, giving in to lethargy and avoiding an irritating headwind.

The Sydney-Hobart yacht race revelry focused on the docks where thousands of people milled about taking time to eat or drink at little quayside stalls or crowded around the water's edge gaping at the antics of beer-swilling yachtsmen or oohing and aching at the expensive, superb-looking yachts. A festival atmosphere hung easily over Hobart. Nothing to tear a muscle over, just take life slowly; enjoy the sun and the people. New Year's Eve was more up-tempo than the preceding days. A good time to be with friends - which I was - and an exhilarating finale to the trip.

After the hangover had passed and the Christmas/New Year anticlimax was well under way, I decided to make a move for dear old Perth. The last leg of the journey was along the Midlands Highway, only this time I rode through Richmond and up the back way to Oatlands - a beautiful quite area - before entering the main road.

I can't say I wasn't glad to get myself and the bike onto the ferry at Devonport. Even though I now look back nostalgically on the trip, it was certainly a lot of hard, sometimes exhausting, work.

Although I kept something of a diary it was unnecessary for the purpose of writing this story. Every single day of cycling is firmly and photographically embedded in my mind, which is unusual because I don't have a particularly startling memory. I developed a taste for solitude also, although I found that I missed being with people in the evenings; a good reason for joining Y.H.A.

Good cycling and don't forget your sense of humour!

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Above: Nilgiri hills in southern India *Below:* The author and travelling companion.

bicycle touring in india



by Dan O'Brien

For three months in the first half of this year, two of us made a bicycle tour of India. Although to some this may sound like quite an adventurous task, let me assure interested cycle tourists that it is both a feasible and rewarding ride to attempt.

Before our ride in India, we toured Sri Lanka for two months, covering a 1600 km of that country's beautiful landscapes. India proved to be equally beautiful, and as it is much more varied in geography and culture, provided more than enough to keep the senses fully occupied.

The calming effect which long-distance cycling seems to produce was reinforced a thousand times by the incredibly relaxed and communal nature of Indian life.

For many reasons, not the least of which is the low economic status of the majority of the people, life's complexities as we know them, are noticeably absent. Life for the majority of the people and for the traveller is much simpler and much more straightforward than most of us are used to. Add to this the zeal which the local people seem to display in wanting to include you in their lives and the immense novelty value which you present as a foreign cyclist and you will be assured of a very involving and exciting time.

To deal now with more specific topics, one of the first to spring to many minds is health, and apart from preparing oneself with vaccinations before setting out, the two major items here are food and water. While we met many travellers who had been drinking local water throughout India and who had not

succumbed to dysentery or other bowel illnesses, we felt that this was perhaps related to the small daily quantities they were using, and also to the fact that most of them were seasoned travellers.

Riding a bicycle in such a hot climate requires enormous intakes of water. I would estimate that our total liquid consumption per day would have been nearly ten litres each. Under these circumstances we felt it necessary to boil all of our water, which we did with a small kerosene stove. Kerosene was available everywhere, although there were shortages in some areas.

The stove itself is used extensively by the local people, and therefore spare parts and repair facilities were readily available. We found it more convenient to purchase our own pot for boiling rather than rely on hotel owners to lend us one. We normally had the water boiling for several minutes, and found this adequate for sterilising. Remember that water boils at a lower temperature at higher elevations, making it necessary to boil the water for a few extra minutes on these occasions. In some cases hotels provided boiled and filtered water, but this was definitely the exception rather than the rule.

Food we found was generally prepared in hygienic circumstances and as such presented no real problem. The food was both cheap and nutritious, and it was possible to achieve a balanced diet with plenty of protein in the form of fish, eggs and nuts. There was plenty of excellent fruit available just about everywhere and we washed our fruit before peeling and eating. It seemed fairly

obvious to us what food was likely to be safe, and what was not.

Another topic of vital concern to cyclists are road conditions. Surprisingly the roads in India are generally excellent. All major roads and most of the minor roads are sealed. We were able to travel wherever we wished and keep on good sealed roads, which were usually free of potholes and would compare very favourably to country roads in Australia.

The road network is very extensive and presents no restriction as far as access to areas you may wish to visit. We didn't have to travel any real distance on dirt roads. Traffic varies with where you are. In the countryside motorized traffic is light, the roads are quite frequently used by bullock carts and pedestrians and in some areas these are the major users.

In cities and towns the traffic is hectic, to say the least, but again manageable. It is advisable to have a horn on your bike to warn others of your approach, as people will walk straight out in front of you without looking. We were both wearing helmets at all times, which I would consider as essential.

Equipment

As for the bicycles themselves, we were both using triple chainsets, which if you

are intending to ride in mountainous regions are a good idea. Elevation is much greater than in Australia, even in the south you can expect climbs of 2 000m if you are riding to hill stations, and climbs of more than 1 000m just crossing from one coast to another.

My partner was riding on 26" wheels, spares for which are available everywhere. I was using 27" wheels which are virtually unknown in India, however I was able to purchase tubes and tyres in Madras and New Delhi, and even though I never attempted to, I feel sure that they would be available in Bombay, but most probably nowhere else. A five-speed bike using a Simplex derailleur and 27" wheels is made in Madras, but the manufacturers seemed unwilling to supply spare clusters, derailleurs or rims.

We carried spare everything, excepting frame and rims. These made up a small parcel which was no trouble to carry along. As bicycles are a, if not THE major form of transport in India, the country is very well set up for bicyclists. Outside banks, post offices and many other public and private enterprises are bike racks complete with attendant. There are literally thousands of bike shops all over the country where many usable parts, such as axles, bearings and such are available.

On leaving Australia we had with us tents and camping equipment. Unfortunately we found it virtually impossible to camp out. Stopping along the road even for a few minutes would guarantee a crowd of onlookers. Our tents, I feel sure, would have been surrounded all night if we attempted to camp. Crowds of onlookers are an everyday part of riding in India. We felt put out at first by this, but it is certainly not an insurmountable problem.

We were able to stay in cheap hotels everywhere we went. We made it a policy to find a hotel room as soon after arriving in a town as possible. Once we removed our gear, we were more mobile and less conspicuous. Hotel owners treated us very well. It was almost always possible to take the bikes into our room, in fact we were urged to do so.

It was always possible to find a secure place for the bikes inside the hotel somewhere. It was also permissible to boil water in the room. As most of them had attached bathrooms this seemed the obvious place to do so.

Generally we found it possible to leave our bikes chained to some fixed object and leave them while shopping etc. Gear levers were never as you left them, but usually there were no more problems than that.

As for finding your way around the country, excellent maps are available from Survey of India offices, located in all major centres, as well as the Indian Automobile Association. We found having a compass, particularly for finding your way around cities and larger towns, invaluable. Road signs are almost always given in English as well as local languages. We didn't have any problem finding someone who could speak English. Understanding the way some people spoke English, and making ourselves understood was sometimes rather difficult, but certainly not a major problem.

Taking your bicycle on aeroplanes is again no problem, but you will find it easier if you remove both wheels and secure them to the frame. It will usually be included as part of your baggage allowance.

I think the descriptions I have given cover most of the important areas relating to touring in India. Although both of us have toured in Australia, neither of us had had any experience of riding overseas. It is certainly possible to tour in India and Sri Lanka, and I think we both had an easier time than other travellers using public transport. Having our own transport allowed us much greater access to areas where public transport was not available. As is the case with riding anywhere, being on a bicycle puts you in better contact with the people, and certainly with the land through which you are travelling, which surely is the aim of every traveller.

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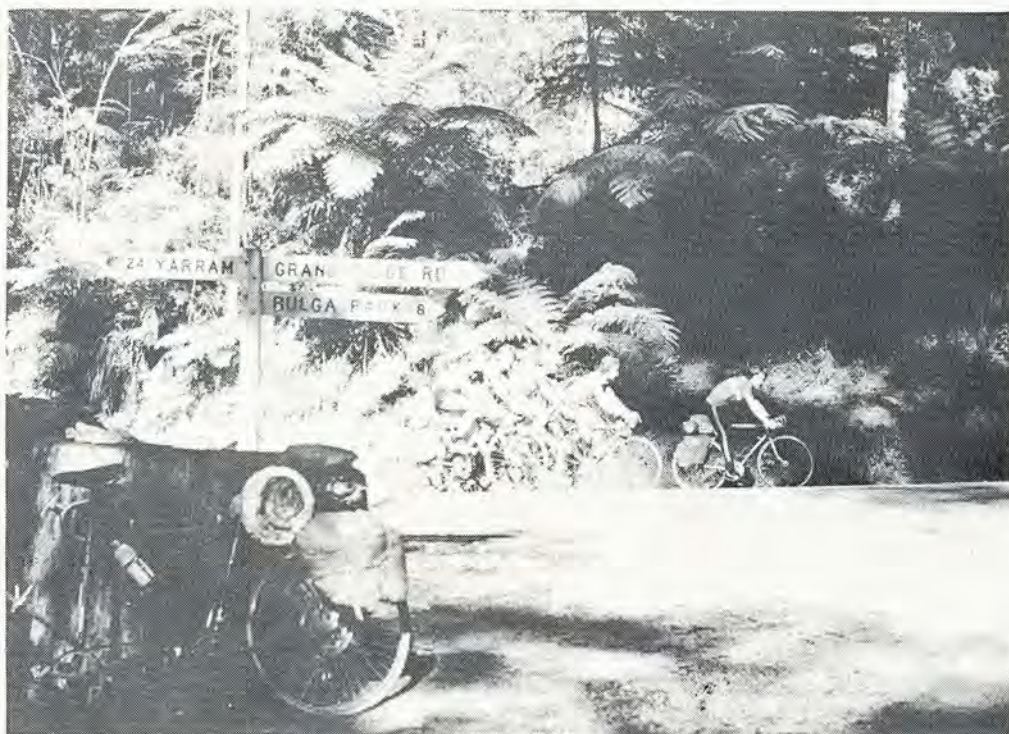
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The end of the Grand Ridge Road near Carrajung and the beginning of the bitumen.

THE GRAND RIDGE ROAD

by Peter Signorini

It began as an organized club tour for the Eastern Bicycle Touring Club. By the time the Easter week-end was over, eight cyclists had made a circuitous tour of 305 km on seven bicycles. We experienced seven punctures, three rack failures and 138 km of unsealed road varying from good, hard, smooth clay to bone-jarring corrugations, large rocks and tyre-gripping soft gravel.

Warragul was the supply point for lunch, at the end of an 1½-hour train journey from Melbourne. We left the hectic Princes Highway and climbed south out of town on the Korumburra Road, just south of Ellinbank we had lunch under a pine tree. Rolling, wooded farmland continued through Tetoora Road and we joined the Grand Ridge Road soon after. This testing but scenic road runs along the high tops of the Strzelecki Ranges for 138 km. There are very few towns along it, most names on the map being just names. Food and some other supplies can be obtained at Mirboo North (population 1960), Balook Guest-

nouse, and in Tarra Valley, below the ridge road down a rough, tortuous, eight km of gravel road through a beautiful valley. However, it is wise to carry most essential items with you, and they could be obtained before you set out from Warragul, Morwell, Traralgon or Korumburra and Leongatha if approaching from the south.

The road climbs first through open dairy land to Eccles Minor, near Trida, after which our tandem had its first puncture. With the extra load on two tyres it was forced to travel more slowly on the unsealed roads. We began to travel through forested country, and passed through Hallston in a flash. From here we descended in great sweeps to the Tarwin River at Allambie South and joined the sealed road. After running alongside the river for a few kilometres we began a climb up Dickies Hill. In the brilliant afternoon sun we coasted down into Mirboo North on a good road to refresh ourselves at the local milk-bar.

The camping ground here was rather basic, set up mainly for on-site vans, and proved relatively expensive. As this is a

dairying area with relatively small holdings, it shouldn't prove too difficult to camp on a farmer's property (with permission of course). Mirboo North is at the end of one of the many closed rail lines in Victoria, shut down in 1974. The townsfolk plan to set up a railway museum. The station, goods shed, J505 locomotive, ABE carriages and a ZL brakevan are being restored. We were camping on what had been the shunting yard.

The next day we enjoyed the luxury of a sealed road through sparsely-populated dairy country to Boolara South and Mirboo East. Here there is a big winding climb on bitumen to the ridge top, which has some fantastic views of the road below and the hazy alps in the background. Soon we were travelling on gravel roads through Forestry Commission land, planted with monocultures of pine and mountain ash. However, enough remains of near-virgin forest to make it pleasant. Lunch stop was near Gunyah (no more than a junction).

At Ryton Junction we joined the Midland Highway, indistinguishable from the Grand Ridge Road in width and surface. Through Ryton, English Corner and Binn's Hill Junction to Valley View we travelled most definitely on the ridge, with views north to the alps and south to Corner Inlet. Just after entering Tarra Valley National Park, one of us hit a bad pothole at speed, and succeeded in puncturing both tyres at once. He was not impressed and on the way down the valley to a camping site another of us narrowly avoided a collision — with a lyre bird!

There are two campinggrounds in the valley and one on the ridge at Balook, and Tarra Valley Caravan Park was full. We tried Nangeela and the proprietor was very kind to us. Although he was full, he allowed us to use land at the back of the park. After a warm meal, hot showers, and some conversation around the fire, we were all prepared for an early night.

The next day, a fine Easter morning we climbed the ten gruelling kilometres back up the Tarra Valley Road. This road has been damaged somewhat by floods, so soft edges (and in places the whole road was soft) together with a constant gradient keep the speed down to a crawl at times. At the top we pressed on to Balook, one of the highest points in the Strzelecki Ranges, with its guesthouse, devonshire teas, and an antiquated petrol bowser. Our group boosted the proprietor's business substantially. Outside in the sunshine the views made us feel like we were perched on the roof of the world.

We skirted Bulga National Park, then proceeded on through state forest towards Blackwarry but then catastrophe. The tandem's rack had broken. We were able to share out the heavier parts of the

tandem's load and wire the rack up with a spare spoke and electrician's tape.

Pressing on along a broad open ridge we reached the end of the Grand Ridge Road at Carrajung. In the distance we had caught glimpses of a steep, sealed road, and we now would have to climb it. After it and a rest we continued to Gormandale.

Ten kilometres later our lead riders halted outside Gormandale's one, shut, milk bar. Several of us did not have our lunch, so we rode past the butter factory for Traralgon. The tandem, lightly laden and on good roads drew off into the distance. The rest of us cruised along into Traralgon absorbing views of the alps in the distance, and Loy Yang power station, under construction a few kilometres away.

Traralgon was all shut for Easter Sunday, so we set off the the coal mining town of Morwell, dominated by the State Electricity Commission installations. Then to our final night's camp, at some friends' farm near Driffield, where we were treated to some real country hospitality. After a late morning's rise, an interesting tour of the farm, coffee and scones we departed for Thorpdale. We made good time on the sealed road through the southern parts of the Haunted Hills, supposedly so named by Count Edmund Strzelscki after a bad night with food poisoning. Thorpdale is a quaint little town, on another closed railway line, and we found it in a holiday

spirit. It was the annual Thorpdale Potato Festival with a plane overhead dropping packets of potato chips and para-gliders, games and stalls around the recreation oval, and vintage cars in the main street.

We lunched on a hill overlooking the town beside potato fields, then continued to Childers. We left the bitumen here, and began to climb gradually up a valley which unfortunately had been horribly defaced by clear felling of the forest. Near Kerrie Brae (469m) we began to descend the old Leongatha Road. A better sealed road exists further on and should be used in preference, for we found this to be a horror road consisting of six kilometres of water-rutted, incredibly steep gravel descent.

A fully laden cycle tourist on such a road must go very carefully, for if the brakes are used excessively the heat build-up will cause fade, yet too little braking can lead to phenomenal speeds propelled by 15-20 kg of gear. Fortunately the tandem wasn't with us. Here the hills rise steeply out of a river plain, and the views are exceptional, but we could not appreciate them on this road. Our rims cooled in Yarragon as we checked the train times.

Hazeldene Road passes beneath the hills we had just descended, and has some hard climbs and descents as it crosses the tributaries of the Moe River. After the descent to and stiff climb out of

Bull Swamp, we made an appropriate entry into Warragul, descending in sweeps to the Princes Highway with its chaotic traffic and deserted footpaths. The train got us home without hassles.

Tips for doing the Grand Ridge Road Tour.

TAKE ample food supplies and spare parts as bike shops and even small towns are almost non-existent.

BRING ample clothing or a warm sleeping bag in late autumn, winter and early spring, the nights get quite cold.

DON'T expect enormous milages on unsealed roads although one may be surprised at times.

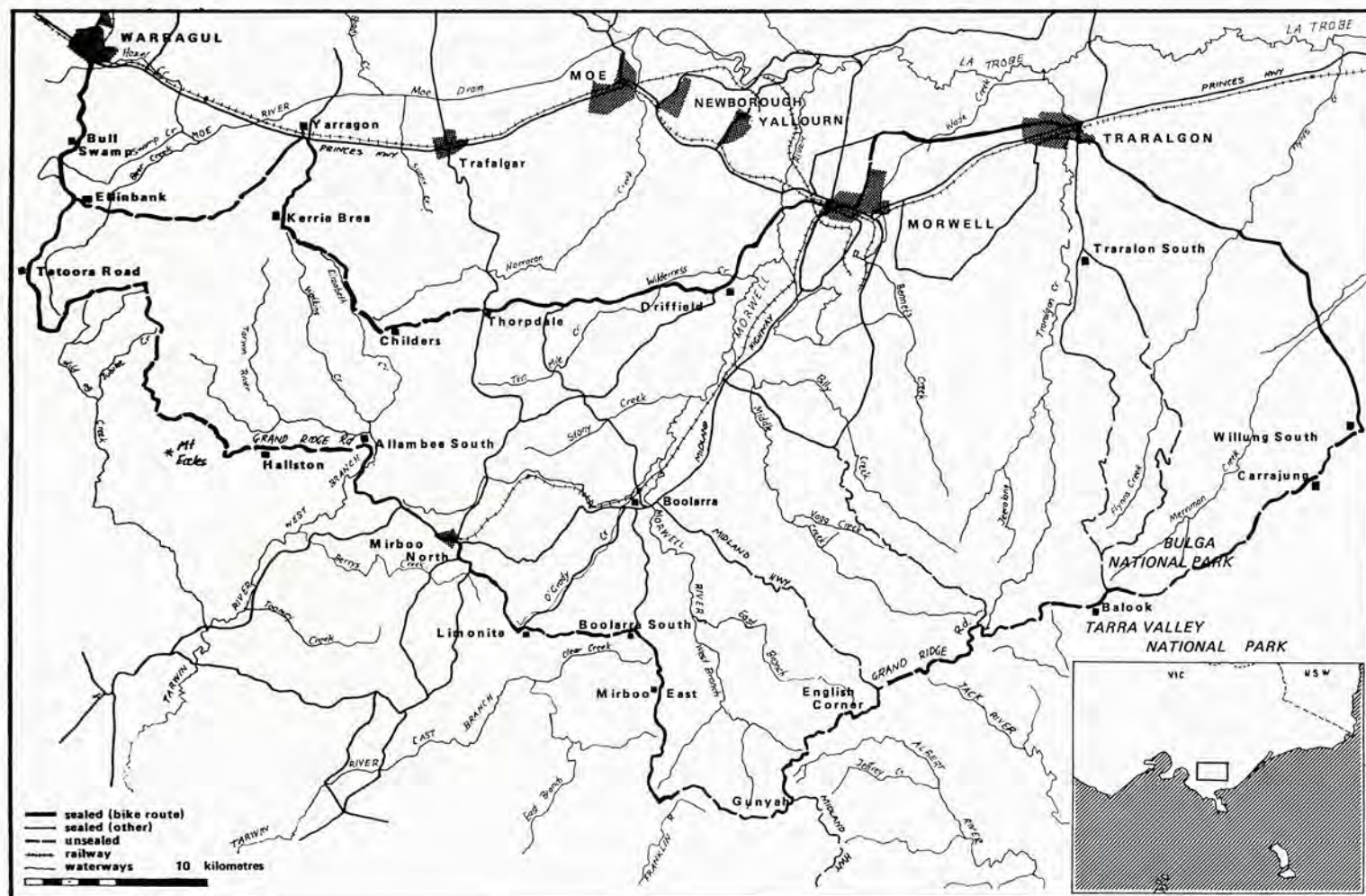
DON'T ride singles or light-weight clinchers, far better to wear out a cheap, chunky pair of tyres. Singles would have gone underground in some of the soft sections encountered.

DON'T assume your bike will remain in good condition for long, keep a constant watch for loose parts, falling tyre pressures and broken spokes.

DON'T stick to a rigid program without variations. Flexibility is necessary to take advantages of opportunities occurring and problems arising en route.

DON'T use poor quality racks.

The Eastern Bicycle Touring Club can be contacted through Peter MacAllister on (03) 878 6993.



GOSSAMER ALBATROSS

PEOPLE-POWERED PROGRESS

Bryan Allen, pedalling pilot with Gossamer Albatross.



CAPE GRIS NEZ, FRANCE, June 12 — Bryan Allen's flight of imagination became a reality this morning when he brought Gossamer Albatross to earth on the beaches of Cape Gris Nez at 8:45 a.m.

Allen's odyssey had started 35 km away across the English Channel at Folkestone, England, at 5:51 a.m. He thus becomes the first person to ever fly an airplane across the Channel using only his muscles to power the craft.

The Californian's historic feat is by far the most dramatic in the annals of humanpowered flight. The longest previous flight was a 20 km, 69-minute venture in the Mojave Desert in April when Allen was preparing for his assault on the Channel. A predecessor of Gossamer Albatross, the Gossamer Condor, had held the earlier mark of about seven minutes.

The mastermind behind this morning's record flight is Dr Paul MacCready, a Californian scientist who designed Gossamer Albatross. He will collect the Kremer Prize of about \$200 000, which triggered the attempt. MacCready's task was underwritten by The Du Pont Company, which made most of the lightweight engineering materials that reduced the weight of the plane to only 32 kg, even though it had a 29-metre wingspan.

The attempt drew tremendous attention in England. Henry Kremer, who donated the prize money to encourage humanpowered flight is a British industrialist, and the competition for the first successful Channel crossing was conducted by the Royal Aeronautical Society. Additionally, MacCready and his crew were introduced to the international press by American Ambassador Kingman Brewster in a news conference at the American Embassy.

Scores of reporters and nearly a dozen television crews were on hand for this morning's flight. The official convoy was led by the 17-metre Lady Ellen Elizabeth which kept in communication with the Coast Guard and Allen. Three rubberized craft followed the Albatross — which moved at about 20 km/h at an average height of about ten metres — in case a rescue from the cold water was necessary.

French officials were on the beach, still surrounded by bunkers and bomb craters from World War II, to greet Allen and his entourage.

Two years ago, in August 1977, the MacCready-Allen team won the first Kremer prize in the forerunner of Gossamer Albatross, Gossamer Condor, by successfully flying around a figure-8 course, a distance of 2 km in about seven minutes. Until that time, no humanpowered craft could combine maneuvering and sustained flight of more than a few

seconds, although the dream of self-propelled, controlled flight goes back to da Vinci.

To achieve flight, Gossamer Albatross had to be lightweight yet durable. Three of the key components are lightweight films and fibers made by Du Pont. "Mylar" polyester film covers the wings and is also used to enclose the pilot's compartment. Cords of "Kevlar" aramid fibers (normally used in radial tyres) connect the controls and also brace interior structures. "Delrin" acetal resin is used in the pulleys.

This lightness means that Allen, a 26 year old bicycle racer, was able to keep the plane aloft with a physical output of only .25 horsepower.

The airplane is powered by a single propeller connected by chain-drive to a bicycle-like pedalling device operated by the seated pilot. The pilot rides in an enclosed compartment of transparent film which rests under a huge wing. A smaller airfoil rides ahead of the main wing for stability.

Paul MacCready, designer of the Albatross.



Dr MacCready, 53, is no stranger to flying, having won the world's soaring championship in 1956. Today, he is president of a California firm specializing in environmental and energy studies.

"A common question is 'What is the value of humanpowered flight, and what is its future?'" Dr MacCready said recently. "I think that one of the greatest charms of this program is that it is a great challenge and fun, that there is no need to justify the field on the basis of some eventual practical result.

"Conceivably there will eventually be more efficient surface transportation vehicles because of perspectives coming from the Gossamer Albatross program, or improved ultralight aircraft, or better techniques for helping people with their physical conditioning.

"However, we'll consider such things only after we are standing next to the Gossamer Albatross on a beach in France."

Today, Dr MacCready can begin these considerations.



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Getting Started in Bicycle Touring: A simple guide to beginning bicycle touring. Gives good basic info like: what to take, what kind of bike suits best, plus hints on where to go and what food to carry. 8pp magazine format. 20 cents

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EAST COAST BICYCLE ROUTE BULLETIN

Wollombi Brook east of the village of Wollombi.



Background: The bicycle route idea is not a new one. The Americans made the idea a reality in 1976. The largest official event of their bicentenary celebrations was the inauguration of the Trans-America Bike Trail, a truly magnificent route crossing the north American continent from Oregon on the Pacific coast to Virginia on the Atlantic coast. More than 4 000 cyclists travelled all or part of the route in that year and many thousands have ridden it since.

The group formed to plan and survey the route and host the rides is still going and is actively planning other routes in the USA. In Australia the idea has been kicking around since at least then. Riders who took part in Bikecentennial have been among the most interested in seeing something happen here.

Freewheeling would also like to see bicycle routes in existence here, with perhaps the first one linking the major population centres of the east coast. Hence the East Coast Bicycle Route, the guide to the first section of which appeared in *Freewheeling four*. The criteria for a bicycle route (as we see it) are:

- it should wherever possible avoid major motor traffic routes, seeking the quieter secondary roads and places of interest and beauty;
- it should generally provide a safe as well as direct route with good access to rail and other compatible transport systems;
- it should have camping spots and other accommodation facilities as well as

suitable supply points along the route;

- it should be well known to the cyclists and this is perhaps best achieved by publishing all the relevant details with appropriate maps in a guide or series of guides.

As a direct contribution towards the bicycle route, *Freewheeling* has undertaken to produce a series of five 12-page guides outlining a bicycle route between Melbourne and Brisbane. The first of these guides, *Sydney and the Bush*, appeared in *Freewheeling four*, work has begun on the next guide and research is continuing on other sections of the route. All work has been voluntary and it is hoped that with the eventual publication of a complete guide book that any resulting surplus money will go towards further projects concerned with bicycle routes.

In the meantime, interested bicycle riders can contact the bicycle route group care of this magazine (address PO Box 57, Broadway 2007). No official organization is planned, but an ad hoc group exists and meets occasionally to co-ordinate survey and publication.

This newsletter will remain a regular feature of *Freewheeling* and will keep riders up to date on bicycle route activity. In time, governments and road authorities will be approached to contribute in the form of signposting and special road works to improve safety for the increasing number of riders using the routes.

Warren Salomon

The Meeting of the Three Waters.

For many years there have been rumours concerning a dam that would flood the Wollombi Valley. Fortunately no action was taken to fulfil these proposals; especially since this region is an excellent touring environment. But this year the Water Resources Commission of NSW has published its intention to build five dams in the Hunter Region, one being near Wollombi. The town is on the east coast bicycle route.

If this dam were built, all those using the area would be affected. Cyclists would find access problems, some people will lose part of their properties, but most would have to move out of the valley altogether. No amount of compensation can replace the beauty and the historical associations to be found in this region.

I have criss-crossed the area many times, finding it a rare and unusual landscape in our sprawling country. It is a taste of Tasmania close to Sydney. The National Trust has recognised this value and has classified it as a scenic landscape which must be preserved. Many of the historic buildings and the village of Wollombi are also registered for preservation by the Trust. Even the road through the valley, the Great North Road, which was the only route north in the beginning of last century, has been classified.

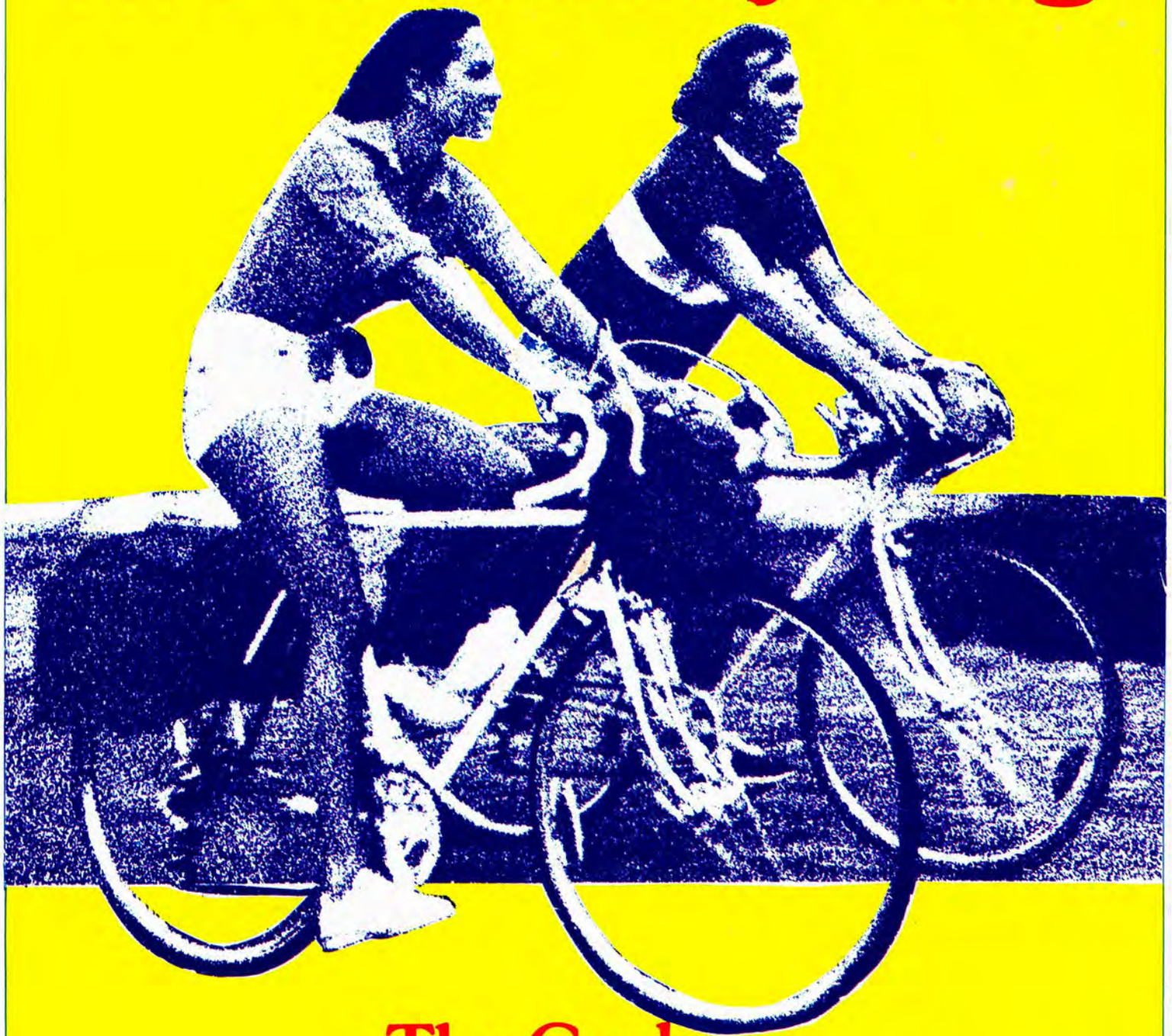
Aboriginal people occupied the Wollombi Valley before European settlers and gave it the name meaning "the meeting of the three waters". The proposed dam would flood many of their sites and relics and destroy the treasured cave paintings.

It is ironic that this story is presented in *Freewheeling* — a magazine devoted to the bicycle as a legitimate form of low-energy transportation. The Wollombi region is to be dammed to provide water to wash Hunter coal for export to earn the capital to import oil for our energy-dependent lifestyle. However, any energy policy based on exchanging coal for overseas oil must be suspect. Flogging off our most promising medium-term fuel (coal) to shore up our rapidly-depleting short-term fuel seems irresponsible.

It is obvious that the Wollombi is unique and extremely valuable to the residents and its visitors. We feel there is no over-riding need for the dam. To ensure that this dam is not built and that the Wollombi is not desecrated, *Freewheeling* asks concerned cyclists to contact the Wollombi Valley Dam Protest Committee, c/- Post Office Wollombi, 2325, who can provide all details, and will gratefully accept donations.

Wayne Kotzur

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